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To My Mother



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PREFACE

This volume seeks to give a comprehensive treatment of the subject of investment.

At no time has there been greater need for reliable data on investment principles and policies. The investing public now includes literally millions of individuals and virtually all business and industrial organizations of size. The wide distribution of Liberty bonds during the war, the various thrift campaigns, the development of the investment trust idea and of customer and employee stock ownership plans—all have combined to widen enormously the extent of the investing classes. The public offering of securities is no longer limited to those of a few governments and large railroad corporations, but all classes and kinds of civil organizations and business enterprises now make appeals for investment funds. In schools of business administration the study of the principles of investment, not merely as related to the handling of personal funds but also as they enter into the management of an enterprise, is receiving increased attention.

In this volume the author has endeavored, on the basis of many years' experience both as an investment analyst and as an instructor on the subject, to present in non-technical terms the principles which all investors must master. His aim has been to present the underlying economic theory as it is worked out in the actual practice of investment institutions today.

Part I gives a general survey of the whole subject, with special emphasis on the development and place of investment in the field of business and its relation to other economic, legal, and social institutions. The fundamental principles of the subject are presented in this Part, along with a description of investment machinery, as a preparation for later analysis of the various classes of investments.

The classification of investments followed in Parts II, III, and IV is in accordance with common usage, and their arrangement—Commercial and Real Estate Loans, Civil Loans, Corporation Securities—is based upon their historical and economic significance. Part IV includes chapters on financial and insurance company stocks, which, because of their greatly extended distribution among the public in recent years, have come to occupy a distinctly important place in the investment field.

The method of treatment followed is practical throughout. The discussion has been arranged to exercise the student constantly in applying to each class of securities the principles laid down in Part I and in the use of practical tests of values such as are commonly employed by bankers and analysts in "the Street." As a further aid to the class-room use of the volume, an Appendix gives an extensive selection of practical investment problems to be worked by the student. These have been drawn largely from the author's experience as an analyst. They have been selected and set up in accordance with class-room objectives and conditions.

A. M. SAKOLSKI.

New York City,
June 1, 1925.

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PRINCIPLES OF INVESTMENT

Part I—General Survey

CHAPTER I

NATURE OF INVESTMENT

The General Meaning of Investment.—Investment in a broad and general sense signifies the use or employment of capital for purposes of gain.¹ In this meaning it is almost synonymous with “enterprise,” the only distinction being that investment always involves the application of capital. Thus a farmer who buys land and proceeds to cultivate it with a view to profit is essentially an investor. Similarly, the business man who buys or builds a factory with his own funds, with a view either to renting it or operating it, is in either case an investor. If, however, he should borrow all the funds necessary to build or operate the factory, and not employ any of his own capital, he is not an investor, but an “enterpriser.” Economists have adopted the French word “entrepreneur” (enterpriser) to designate this latter type of business man. He constitutes to-day an important factor in modern industry, so much so that many economic writers now consider the “entrepreneur” as a separate factor of production—*i. e.*, in addition to land, labor and capital.

¹ “There is a sense in which all business enterprises are investments. To build a ship or a railroad, to start a store or a factory, to pay wages or place an advertisement—to do anything, in short, which involves an outlay of money for the purpose of increasing it—is an investment of capital. That is the sense in which political economists use the word, but in common use it has a more restricted meaning, viz.: the outlay of money in the purchase of property or securities which are expected to yield a sure and regular income without further effort on the part of the investor.”—*Lectures on Commerce*, edited by Henry Rand Hatfield, 1907, page 284.

Definition of Investment.—From a strictly financial standpoint, modern investment is the surrendering of purchasing power to another with a view to obtaining a profit in addition to the return of the amount surrendered. This definition does not apply to the ordinary usage of the word “investment,” since as pointed out above anyone who uses funds in executing a business operation may be said to make an investment. Thus a man who purchases a residence may be regarded as making an investment. But it would not be investment in the strict financial sense, since the purchaser of the house retains control of the property and does not use it for the purpose of receiving income. Similarly, a manufacturer or a merchant who uses his funds to build up and conduct a business is not an investor from the financial viewpoint so long as he does not surrender the control of the funds.

In the strictest sense, therefore, “investment implies the divesting oneself of the possession and control of one’s assets and granting such possession and control to another.”² There is in addition a further implication in the word, namely, that the prime reason for divesting oneself of assets and turning them over to the control of another is for the purpose of obtaining a profit or periodical income as well as the final return of the sum advanced.

Definition of Capital.—The common and most accepted definition of capital is wealth set aside for the production of additional wealth. Wealth, in turn, is defined as “material objects owned by human beings.”³ Whenever human beings have acquired wealth, which, instead of consuming immediately they put to use in the equipment of industry, maintaining government, or for some other gainful purpose, such wealth becomes capital. “But, since, from the point of view of the ordinary man,” as Hartley Withers points out, “capital is

² C. E. Sprague, and L. L. Perrine, *The Accountancy of Investment*, page 20.

³ Irving Fisher, *The Nature of Capital and Income*.

usually regarded as money invested, and since this is what actually happens in practical fact, it is perhaps better to regard capital as so much capital invested.”⁴ In modern society almost all who earn, receive their income in the form of money. This money can be used for indulgence in amusement, or kept as provisions against future wants, or for the benefit of dependents. But storing money idly in this way does not increase the productive power of the world or give the owner any part of the gains from its productive use. If everybody kept all his money in this way there would be no capital available for investments. “Consequently, it would be impossible to build a new factory, lay out new railways or break a new sod in unreclaimed earth.”⁵

Investment as a general concept, therefore, is a development of the capitalistic organization of society. The accumulation of capital through saving would be of no purpose could it not be applied to future gain and enjoyment. The growth of capital is encouraged not only because capital goods have a future as well as a present value, but also because this future value combined with the profits of use may exceed the present value. The degree of the excess of the future value combined with the accruing profits, over the present value of capital according to the ideas of most modern economists determines the prevailing minimum rate of interest offered for the use of capital.⁶

In modern political and economic organization, where values of goods and exchangeable property of all kinds are measured in terms of money, investment in some form is involved in practically every business or exchange transaction. In every step in the production and distribution of goods and services, in which capital is employed, the owner of such capital risks by its use its future enjoyment, but does so only because

⁴ Hartley Withers, *The Business of Finance*, page 72.

⁵ *Ibid.*

⁶ Future value, in itself, is less than present value, so that unless borrowed capital can be applied profitably and the profits from its use exceed the difference between the present and the future value (*i.e.*, the discount), no income or price will be offered for its use.

the risk is expected to be more than counterbalanced by the gain due to the productivity of such use. Thus, a cotton manufacturer who builds a mill, buys necessary machinery and raw materials and pays wages to operatives—all in advance of the actual sale of the product—is *an investor in the broad and general sense*, in that his purpose is to create values for himself (as measured by money) in excess of the values he has parted with in the production process. Capitalistic gains of this character, however, for reasons to be later explained, are not regarded as essentially true investment gains. Producing manufacturing, distributing and similar economic processes, are much broader concepts than that of modern investment.

Instruments Representative of Investment.—Another feature of modern investment—one, however, that is not essential to our definition or concept—is that the placing of capital funds with others for investment purposes is generally acknowledged by formal instruments, *i.e.*, by printed or written documents which prove or establish the claim to the income and to the return of the amount surrendered, or to both. The documents for the most part have the legal name of “choses in actions” or “negotiable instruments.”⁷ “Choses in action” may be described as written evidences of rights or claims. They are ordinarily transferred from one person to another either with or without endorsement. In most instances they are acknowledgments of indebtedness with a promise to pay a periodical rate of income (interest), together with a specific sum on a given date (principal). The term is also frequently though erroneously applied to written evidences of ownership or of equity (*i.e.*, of limited rights to be exercised in common with similar rights of others) in a property, business or enterprise, without definite obligation of the payment of income or

⁷ Not all “choses in action” are truly negotiable instruments. A negotiable instrument is generally defined as a written unconditional obligation to pay a sum of money, the claim to which may be transferred free from defenses which the maker may have against the original holder.

the return of the principal amount represented by the investment.⁸

The rights of the holders of negotiable instruments are usually set forth in writing on the documents, and are known as the "recitals" and these are strictly construed by the courts in determining the claims of the holders on the one hand and the obligations of the maker of the instrument on the other.

The Concept of Income in Relation to Investments.—

From the foregoing it is evident that *income* is an essential element in the financial concept of investment. The nature of income, though apparently so simple that few economists have taken the trouble to analyse it, is exceedingly difficult to define clearly. Income from an investment standpoint should be distinguished from (1) *rent* and from (2) *profit* (entrepreneur's gain). The term "rent" applies generally to payment for the use of land or building space because of differential advantages possessed by these utilities. The amount of rent in each case, therefore, is determined largely by the relative productivity of the particular property to which it is applied. Since land space and fixed property are not mobile or convertible as are capital funds, there is no economic phenomenon of a general "rate of rent," as in the case of interest on capital. Profit also is of the nature of a "differential," but unlike rent and income, time is not an essential element. Hence, there is generally no computation of the rate of profit by the month, year or any other period. Investors' income (*i.e.*, interest), on the other hand, is based on periodical lapses of time. Hence, the rate, because of the interchangeability and the flow of capital funds, is likely to be the same to all persons when the investment is applied by each under like conditions in the same market.

Speculation and Investment.—The distinction between profit and income as outlined in the previous paragraph forms

⁸ For further discussion of this subject see Chapter VI.

the basis for the distinction between speculation and investment. Speculation and investment are often confused. In any study of investment, it is essential to a clear understanding to distinguish between the two. Though an element of speculation exists in every investment—in fact, in every business enterprise involving the surrender or employment of capital—speculation differs in one main essential from investment, namely, *in its purpose*. In speculation, the chief purpose is to gain in one lump sum and as quickly as possible a profit as well as the return of amount surrendered. In investment, the main object is to acquire a periodical income over extended or indefinite periods of time. Thus, speculation is essentially for *profit*, whereas investment is for *income*. Profit is here considered as an increment to capital—an increase of value. In the distinction between *profit* and *income* it can be readily seen that the time element is as important as the risk element. In speculation, a minimum of time is desired to cover the operation. In investment, the element of time may be neglected if the periodical income is assured over the whole period, and if redemption of the amount of the investment, is in no way impaired. The income, moreover, is not ordinarily considered as a gain or addition to the capital. The investor generally figures on the certainty of periodical income over an extended period of time, whereas the speculator cares little about income, if he can receive back in the shortest time his capital with added profit. Speculation, accordingly, has a much broader field than investment. It is concerned with every class of enterprise or business operation in which changing conditions produce alteration of values and in which gains or losses may be momentarily made. Thus, speculation is largely concerned in the purchase and sale of commodities as well as of securities. Speculation is an incident of trading. Investment (*i.e.*, the employment of capital for purposes of gain) is a factor in modern production. The latter is an essential element in the creation of values; the former is not. In both cases, however,

there is a risk of capital or wealth involved, but in speculation the degree of risk is proportioned to the expected return on the transaction.⁹

Modern Investment.—Transactions that may be termed “investments” are comparatively recent in human history. In ancient and medieval times, investments were infrequent because business men controlled the use of their own property and bartered it in business dealings, just as merchants nowadays do. The earliest forms of wealth were mainly land, precious metals, and other tangible values. Intangible forms of wealth, such as bonds, notes, bills of exchange, or paper money, were little used until the modern period of history. Lord Macaulay relates that when the father of Alexander Pope, the poet, retired from business and moved from one town to another, he carried with him a chest of coins which constituted his accumulated possessions to be expended as needed for living costs. The art museums today contain examples of these old strong boxes which were the means of safeguarding and storing readily exchangeable wealth before the advent of banks. Modern banking institutions did not come into existence until men had funds which they could not use profitably in their own private enterprises and which they were willing to turn over to the use or control of others. Thus the growth of modern investment is closely linked with the development of credit and banking.¹⁰

Reasons for Investment.—Investment has developed and expanded in modern times owing chiefly to two reasons, viz.—(1) The accumulation of funds by individuals or organizations that are unable or unwilling to engage personally or directly in profit-gaining business enterprises, and (2) the desire and need by those conducting business enterprises for capital that they are unable to supply from their own resources.

⁹ Most financial or business transactions, whether of short or long duration, involve the combination of investment and speculation, so that it is exceedingly difficult to distinguish or separate the two elements in actual cases.

¹⁰ See next chapter, p. 13.

The rise of the "entrepreneur" or industrial organizer, as a factor in production having the function of operating business enterprises with capital furnished by others, would not have been possible did there not exist also persons or institutions supplied with capital which cannot be employed personally by them and under their own supervision. Through profits obtained by directing and co-ordinating the three principal factors of production, *i.e.*, land, labor and capital, these entrepreneurs are willing to pay for the use of capital, just as they are willing to pay rent for land, wages for labor, and taxes for governmental services. On the other hand, owners of idle capital in the form of cash or negotiable funds, who may be incapable or unwilling to employ such capital in their own undertakings for purpose of profit, seek to turn it over to others in whom they have confidence when a reward is offered or promised during the period of its use.

The Sources of Investment.—In general, there is but one fundamental source of investment, *viz.*, *savings*. In other words, the accumulation of surplus wealth in the hands of individuals makes possible modern investment. The flow of investment funds, however, is chiefly confined to certain channels, of which the following may be enumerated:¹¹

1. Savings banks deposits—representing, not an expansion of commercial credit, but the savings of the common people.
2. That portion of the deposits of commercial banks which represents the accumulation of the profits of business and which may be withdrawn from business.
3. The funds of life- and fire-insurance companies.
4. The funds of educational, charitable, and benevolent institutions.
5. The funds of estates in cases where the executors decide to exchange the assets at risk of general business for

¹¹ See *Lectures on Commerce*, edited by Henry Rand Hatfield, page 259.

- permanent investments, which call for no business management on the part of the owner.
6. The funds of retired business men who follow the same course for similar reasons.
 7. The investment accounts of commercial banks maintained for the purpose of having some assets which can be converted into cash immediately in case of need.
 8. That portion of the increment derived from former investments which the holders do not spend.
 9. Individual savings of almost all classes, but chiefly business and professional men.

Credit Instruments and Investment.—Along with the accumulation of capital and the rise of an executive borrowing class in society, the development of modern investment has been made possible by the creation and legal recognition of credit instruments. By credit instruments are meant the written documents representing evidences of title to property or claims to definite rights. As already pointed out, a great part of these are legally known as "choses in action." They comprise all classes of claims to value evidenced by documents (such as notes, mortgages, bills of exchange, etc.) which are usually negotiable or transferable. By this is meant that title to ownership can be passed either by mere delivery of the document or by some other method. Credit instruments are of ancient origin and their use throughout the ages has resulted in the establishment of laws, customs and legal precedents regarding their forms, applications and characters. Because of the legal recognition of rights embodied in credit instruments, and the enforceability of these rights in the courts, funds and property that might otherwise remain idle and unremunerative in the possession of the owners are safely entrusted to others. Thus, the essential implication in the concept of investment, namely, "the divesting oneself of the possession and control of one's assets and granting such possession and control to another," is made practical and expedient. It is quite evident,

therefore, that the development of investment and the use of credit is essentially involved in every investment transaction. Investment instruments, whether clearly negotiable in character or not, are "credit funds." From a theoretical viewpoint, at least, it is immaterial whether such instruments are merely titles to equity in property (*i.e.*, shares) or in commodities, or whether they constitute written promises to pay definite sums of money at some future date (obligations).

Investment Neither a Science Nor an Art.—In view of the fact that investment is, as stated above, a development of the capitalistic system of production made possible by the accumulation of surplus wealth and the enforcement of obligations or rights evidenced by written instruments, attempts of various writers to place investment in the category of an exact science, subject to such definite "laws" as are embodied in physics, chemistry, mathematics and economics, is baseless. The fundamental principles of investment are few, and although they may be regarded as more or less fixed or unalterable they have no abstract or physical basis. Without a money economy and without the modern credit system, investment would not exist. Radical changes in the economic structure of society or in the *law merchant* may destroy it entirely. It is a product of civilization and law, and changes as civilization and laws change. It is actuated by the desire for gain and income, and it has developed because of the productivity of capital when applied in business, or in governmental undertakings.

REFERENCES

- CHAMBERLAIN, LAWRENCE. *The Principles of Bond Investment*. Chs. I and II, pp. 1-12. New York, Henry Holt & Co., 1911. 551p.
- FISHER, IRVING. *Nature of Capital and Income*. The Macmillan Co., 1906.
- Rate of Interest: its Nature, Determination and Relation to Economic Phenomena*. Macmillan Co., 1907.
- LAGERQUIST, WALTER EDWARDS. *Investment Analysis*. Ch. I, pp. 3-11. New York, Macmillan Co, 1921.

CHAPTER II

THE DEVELOPMENT OF INVESTMENT

The Earliest Forms of Investment.—In the present chapter, it is proposed merely to trace briefly the development of investments and its historical relationship to the growth of economic institutions such as banks, corporations, security exchanges and the like.

Although investment as defined on page 2 is a comparatively recent development in human history, the groundwork had been prepared in medieval and, according to some authorities, in ancient times. There have been discovered among Babylonian ruins records of pledges of property and mortgages given as security for payment of debts. The ancient oriental codes, including the Bible, and the ancient Greek and Roman laws contain regulations regarding the contracting and settlement of debts and the rates of interest that might be demanded of debtors. The pledge of property as security for loans was well known among the Romans, and was used throughout the medieval period both in the case of realty and personalty. Although coins and to a slight extent, certain credit instruments were in use during all this period, it should be noted that the distinguishing feature of modern investment, namely, the transfer of one's property for purposes of income or profit to the use and control of another, was almost totally lacking. Thus, if land was pledged as security for a loan or a debt, the lender or the creditor took possession of it and enjoyed its yield or usufruct until the loan was repaid. Chattels, likewise, were pawned as security for loans. As the precious metals were used chiefly as pledges for loans, the medieval goldsmiths, of whom the Jews and Lombards constituted the largest element, were among the earliest pawnbrokers. From this busi-

ness modern banking institutions developed, without which investment, as we know it today, would be exceedingly limited in scope and volume.

Land has been the chief form of wealth from the earliest times and the nearest approach to modern investment in ancient and medieval times was land renting. During thousands of years therefore aristocracy was based on land ownership. Moreover, the feudal system, under which a large part of civilized mankind lived during the period just preceding the modern industrial era, marked the beginning of a class of society dependent for income through entrusting the use of their property to others. As land, because of its general utility and income producing quality, was the most readily pledged of any kind of property, income could be obtained by lending on lands and estates as well as by holding them in actual ownership. Land mortgages and land rental thus became the foundation for the further development and expansion of investment activities.

The gradual breaking down of the feudal system was followed by the upbuilding of strong national governments capable of enforcing revenue collections in a standard money. This currency when used as a measure of deferred payments opened a channel for investment. It stabilized values and rendered the extension of credits feasible. Although there is no record of public borrowing by governments in ancient or early medieval times, the practice of sovereigns forcing loans or gifts from wealthy subjects and retainers prevailed generally. With the growth of democratic institutions and the development of orderly fiscal systems, national and local governments became borrowers in the same manner as individuals. This establishment of public credit, though a slow growth through the centuries of intense national development, forms an important factor in modern investment expansion. It has accompanied the evolution of banking and credit institutions whereby currencies having fixed values in international ex-

change transactions have been created, thereby according standards of deferred payments.¹

The Rise of Banking Institutions.—Money and coinage are as ancient as civilization, but banks and banking, as specialized business institutions, are a modern development. The earliest instances in medieval times of anything resembling banking functions was the deposit of precious metals with goldsmiths or high dignitaries for safe-keeping. Gradually, as the interchange of goods and services in terms of money values expanded both nationally and internationally, and standardized systems of account keeping came into use, the convenience of having specialized offices for transferring values by means of book entries, as well as for holding values on deposit, was recognized. Perhaps the leading incentive to the rise of banks was the use of bills of exchange throughout Europe as a means of making payments. The credit for the introduction of the bill of exchange in industry and international commerce belongs to the Jews of the Middle Ages. "They discovered the means of substituting impalpable riches for palpable ones, the former being transmissible to all parts, without leaving behind them any traces indicative of the way they have taken."²

The first establishment of a bank of national importance

¹ "Apparently, the first money lending was to government or cities, principally in Italy, and centering in such places as Genoa and Venice. The advancement of funds by individuals who specialized in that business appears in medieval times. Before then, demands for very great sums of money were not numerous and were filled by merely seizing or taxing the wealth of the helpless merchants. There were few expenditures for internal improvements in those days, and when forts or walls had to be built the feudal lord would command the labor of his serfs. In war each man had his own equipment and no wholesale outfitting was necessary. The Crusades required funds and much money was raised by the great lords by giving a city its freedom if it contributed handsomely to their chests. In Italy, especially among the Lombards of the north, sums were raised in medieval times for the various cities by money lenders. The chances were no more than even that the loans would be repaid. The business was a precarious one. In France we read that Philip the Second disapproved of loans and 'repudiated his debts to put an end to the villainous financing.' Willis (in his *Banking and Business*) mentions the merchants of Hansa as important lenders to the kings and emperors of Europe in early times. In 1487 the Fuggers, a banking family in what is now southern Germany, had attained much power as financial supporters of the royal governments, and enjoyed a wide reputation."—*Investment Banking in England*, by Bradley D. Nash, pages 8-9.

² *Percy's Anecdotes on Commerce* (1826 edition), page 40. For discussions of bills of exchange as investments, see Chapter XI.

was in Venice in 1171. The Bank of Venice, as originally organized, however, was merely a device for recording the receipts of a loan to the Venetian Republic, forced from its citizens, together with the distribution of interest payments to the lenders. It is believed, though not definitely known, that the bank was used as a means of transferring the right to receive the interest on the loans from the original lenders and their devisees to others. In this respect, it became an ideal instrument of investment, registering the exchange of claims to future income.

Despite the rapid growth of commerce and shipping following the founding of the Bank of Venice, it was not until early in the seventeenth century that public or private commercial banks came into existence. In 1609, the Bank of Amsterdam was organized on strictly commercial principles. It was followed by the Bank of Hamburg in 1619 and later by the Bank of Genoa, the Bank of Stockholm and the Bank of England. The shares representing participation in ownership of these institutions became a profitable field of investment. Their principal utility, however, was the credit facilities afforded merchants and shippers and the circulation of currencies having sound redemption value. Through their operations exchanges were facilitated and a new source of capital was furnished to business enterprise. Banking, accordingly, throughout its history, has been closely identified with credit and investment. Today the one field can hardly be separated from the others.

Development of the Business Corporation.—The idea of the corporation can be traced from the ancient Romans, but it was not until the seventeenth century that business and commercial enterprises took this form of organization. Following the great geographical discoveries of the Portuguese, Spanish and British explorers, shipping and commercial operations began to be conducted on an increasingly larger

scale. Individual enterprises soon became larger than any one individual could or would undertake from his private store of capital. The logical outcome was the banding together of business men to inaugurate, operate and control financial, industrial and commercial undertakings. Early examples of such combined efforts were the buying or chartering of an ocean vessel, the establishment of a bank or an insurance institution, the construction of roads (turnpikes) and canals and the building and operation of factories. The corporate form of organization, under which an individual can enter into an enterprise with no greater risk than the funds he originally pays out for the purpose, offered many advantages in the joint operation of business enterprises. Good examples of early large trading concerns, which furnished means for the investment of funds, by individuals, were the British East India Company and the Dutch East India Company that furnished the first settlers to New York. The shares of both these companies had a wide ownership, and were well distributed among investors.

From an early date, the corporate form of business enterprise has played a prominent rôle in American industry. "In fact," says a keen student of English and American history "the whole advance of English discovery, commerce, and colonization in the sixteenth and early seventeenth centuries was due not to individuals, but to efforts of corporate bodies." "It was a corporation to which Sir Walter Raleigh, in 1587, entrusted the colonization of Virginia. The first permanent English settlements, both in Virginia and in New England, were made on the initiative and at the expense of corporations modeled after the contemporary joint stock companies for foreign trade. For over a century before the Revolution, the colonies of Connecticut and Rhode Island were each governed by a "Governor and Company" incorporated by charter from the English crown. The colony of Georgia was founded, and for twenty years had its destinies directed, by a group of

charitable English gentlemen who constituted a typical English eleemosynary corporation.”³

Furthermore, as fast as the plantations grew into communities, their inhabitants naturally reproduced the corporate institutions with which they and their fathers had been familiar in the mother country. The earliest of these to spring up in America were of the type which we should now designate as public corporations—such as towns, boroughs and cities; but before the end of the colonial period, a considerable number of truly private corporations had been established for business purposes.⁴

It was not, however, until the early part of the nineteenth century that certain developments increasing both the supply of and the demand for corporation capital became dominant factors promoting investments. Wealth accumulated very rapidly in the period following the Napoleonic Wars. Machinery displaced hand labor in many industries, and with this development, the size of industrial undertakings expanded on an ever-increasing scale. The wealth of an individual or of a small group was in many cases insufficient to supply the capital needed for an enterprise. Partnerships also became inadequate, since individuals were not always disposed to enter into undertakings with others in which they risked all their wealth. As a substitute for partnership the corporation, stockholders in which were permitted to limit their liability to the amount of their investment, came into favor as a form of business organization. Such corporations, both in Great Britain and in this country multiplied rapidly in the nineteenth century. The various classes of securities representing ownership in or indebtedness of these corporations were readily negotiated and transferred from person to person. They became a leading class of investments.⁵

³ Davis, *Essays on the Early History of American Corporations*, page 3.

⁴ *Ibid.*

⁵ According to Davis, “If the ‘free Society of Traders in Pennsylvania’ be excluded because of its English origin and charter, The New London Society United for Trade and Commerce in Connecticut (1732-33) probably deserve to be called the first

With the increase in the scale of business enterprise, came great progress in transportation and rapid growth of industrial centers. To provide markets for the output of these industrial centers expensive turnpikes, canals, and railways were built with money obtained from investors. Thus, the first half of the nineteenth century, so favorable to permanent public improvements, greatly enlarged the field of investment. Nations and their political subdivisions in their desire to promote industrial development built canals, railways, and turnpikes, and conducted war and bought peace with borrowed money. Indeed, several national governments, and some of the states of the American Union increased their public debts to such an extent that they were later unable to fulfill their obligations to their creditors. There thus arose a phase of public debt repudiation which will be discussed more fully in subsequent chapters.

The Development of Security Exchanges.—The organization of security exchanges marks the final step in the modern investment development. In London, Paris, Amsterdam and New York, and other leading financial and commercial centers, public markets where investments are bought and sold or exchanged have been established and maintained. The London Stock Exchange was formally founded in 1773, although it existed as a meeting place for stock brokers during many years before. It was primarily organized for the purpose of affording a market for the British Government debt, but has developed into the largest and broadest in its dealings of all the present day security exchanges. Moreover, unlike

American business corporation. Even in this case, the title is not entirely clear. The company was indeed a distinctly Connecticut institution, both in its origin and in its act of authorization; and whether its purposes actually included the carrying on of trade as well as the issue of bills of credit, its business nature is obvious. The only doubt arises on the question whether it was really made an incorporation. As we have seen when the question of overtly incorporating it was presented to the assembly, particularly in 1733, that body decided that it had not the authority requisite to incorporate such a 'society;' and when the company pleaded that it was fraternity and not dissolvable, the assembly denied the plea. The act of authorization certainly bestowed many of the attributes of a corporation, but its terminology is not absolutely convincing. And the early demise of the company makes a final statement as to its "corporateness" impossible. (Davis, *The Early History of American Corporations*.)

most European exchanges, it has maintained its private character. By this is meant that it is not operated by the government. The Paris "Bourse" dates back to 1705, and was founded as a result of the gigantic speculation in France promoted by the notorious John Law. It has been given a practical monopoly of the business of executing purchases and sales of public and other securities susceptible of regular quotation ("*valeurs mobilières*"). With this monopoly has come strict supervision, control and regulation by the French Government. Since 1898, the official organization of the Paris Bourse has consisted of seventy licensed members (*agents de change*) who though engaged in a private business, are to all intents and purposes, government officers. A somewhat similar arrangement prevails in Berlin, though the membership here is much larger and the restrictions as to membership less severe. Nevertheless, the Berlin "Bourse" is a government institution, controlled by national laws and administrative decrees.

The New York Stock Exchange was organized in 1817. For convenience in trading however a few brokers in the decade before 1800 met at irregular intervals under a tree near the ancient rampart of the city, whence came the name Wall Street, by which the Stock Exchange and its surrounding financial institutions are commonly designated. At this time, the number of American business corporations could almost be counted on the fingers of one hand, and few of these had their obligations and shares publicly bought and sold. Banks were few, railroads and canals were hardly thought of, and shipping companies were still controlled largely by individuals. There were, however, dealings in the federal government and the state debts, and in bills of exchange arising from shipping operations.

Almost from its inception the New York Stock Exchange has been the center of American investment activity. Like the London exchange, it is a private and voluntary association, limited to 1,100 members, of whom about 700 are active.

Its dealings comprise almost every class of investment, and millions of dollars of intangible wealth are exchanged in the daily transactions of its members. The growth of the power and influence of the New York Stock Exchange is evidence that a convenient, open and unobstructed market place for transactions in all kinds of credit instruments and corporation shares is an essential factor in the development of modern investment. Such organized exchanges give to investments the exchangeable or marketable quality common to most commodities and to other kinds of tangible property,—a quality which, as will be pointed out later, is an essential characteristic of sound investments.

Notwithstanding its influence in the development of investment in the United States, the New York Stock Exchange is not nearly as important as a security market as in former years. The rapid increase in the number of investment dealers, combined with the broader knowledge of security values, has resulted in the creation of “outside” or “over-the-counter” markets. Investment dealers, acquainted with market conditions and with the investment merits of specific securities, are willing to make markets, *i.e.*, are willing to quote prices at which they will buy or will sell. Because of this development, stock exchange transactions are shrinking relatively to the dealings “over the counter.” Many classes of investment securities now find little if any market on the floor of the New York or other stock exchanges. Among these are the obligations of the states and municipalities, of the mortgage banks, and shares of banks, insurance companies, and other institutions. The volume of these securities is enormous, but as pointed out in later chapters they are not well suited to transactions on the large exchanges. A class of investments that have become very popular in the last three decades consists of the shares and obligations of public utility companies. Many of these are known only locally and accordingly have no advantage in being admitted to trading on a national exchange.

Others which have broad distribution among investors are marketed directly through the banking houses or engineering concerns which finance the utilities and control their operations. Many of these banking houses have branches or offices throughout the country connected by private telephone and telegraph wires, by means of which they are enabled to keep in constant touch with investment market conditions relating to securities in which they have dealings.⁶

REFERENCES

- BAGEHOT, WALTER. *Lombard Street*. New York, E. P. Dutton & Co., 1921, 348p.
- DAVIS, J. S. *Early History of American Corporations*. Cambridge, Harvard University Press, 2 Vols, 1917.
- DUNBAR, CHARLES F. *Chapters on the Theory and History of Banking*. New York, C. P. Putnam Sons, 1922 (4th Ed.), 321p.
- MEEKER, J. EDWARD. *The Work of the Stock Exchange*. New York, the Ronald Press Co., 1922, 633p.
- NASH, BRADLEY D. *Investment Banking in England*. Chicago, A. W. Shaw Co., 1924, 114p.
- PRATT, SERENO. *The Work of Wall Street*. New York, D. Appleton & Co., 1921 (3d Ed.), 447p.

⁶ See Chapter XXVII, page 353.

CHAPTER III

CLASSES OF INVESTORS

Investors Not a Distinct Class.—Contrary to common belief, investors do not form a distinct or separate class of the general public. The number of real investors among the population is far greater than is commonly presumed. Every savings bank depositor, every insurance policy owner is an investor, as well as many members of building associations, co-operative societies and other mutual benefit associations. All these institutions receive, handle and accumulate funds with a view to investing in securities or in profit-making enterprises. Accordingly, they invest for and in the interest of others. Direct investment, moreover, on the part of individuals of all walks of life is widespread and continuous, the practice having been greatly stimulated by the sale of Liberty Bonds during and since the World War. Many investment securities, including bonds as well as stocks, are now issued in small denominations (*i. e.*, of \$100 or less), with a view to encouraging purchase by people of small means.

Capitalists as Investors.—An investor who depends chiefly for income on the periodical interest and dividend payments received from securities owned or on the rents from property, or who is engaged otherwise in lending or advancing funds for purposes of gain, is theoretically a capitalist since his prime function in industrial society is the furnishing of funds for productive purposes. A capitalist, however, is ordinarily conceived as a person of large wealth who does not immediately direct a business or profit-making enterprises, yet who receives his income from these sources. Though it is true that the capitalist does not, as a rule, direct immediately the enterprise or organization to which he confides his funds, he frequently

has the power of administrative control, and can select the managers and direct business policies. Moreover, practical investing is a business in itself, so that those possessing or handling large estates comprising securities may find it necessary to give up their time and efforts in examining, selecting and exchanging their investment holdings. This is also the function of investment bankers, savings banks and several other classes of financial institutions. The capitalist, therefore, differs from other classes of investors only in degree and not in kind. As a distinct factor in the investment market he is playing a less and less significant rôle.

Savings Banks as Investors.—Savings banks are primarily investment institutions. The deposits they receive are in a large part invested in income paying obligations, such as real estate mortgages, bonds and notes. The interest that they pay to depositors represents a distribution of investment income. The advantages of the savings bank as an investment organization lies both in the expertness and skill in selecting investments, and in the risk distribution afforded by the large deposits entrusted to them. Further protection is afforded savings bank depositors by their surplus funds which are reserves against losses. It is for this reason that the savings banks are a convenient and safe intermediary in investing the funds of persons of small means. These institutions are controlled and supervised by state banking laws. In many states they are restricted to making investments in classes of obligations, generally regarded as secure. The laws of New York, Massachusetts, Connecticut, and several other leading states require savings banks under their respective jurisdictions to diversify their investments. This means that they are not permitted to invest all their funds in one class or group of securities. Thus, the New York law prohibits banks from holding real estate loans in excess of 70% of their deposits, or obligations issued by railroads in excess of 25%. The kinds

and qualities of the obligations and other securities that may be purchased are also strictly prescribed. All this is done to safeguard against excessive risks and the loss of depositors' money entrusted to the banks.

Trust Funds.—Money or property left in trust for specific purposes either under a voluntary agreement, or in a will by a testator is required in most states to be invested in accordance with state laws relating to trustees and trust funds. In several of the important states trust funds can be invested only under the same restrictions as are applied to savings banks. This practice prevails in New York or Massachusetts. Trust funds are subject to court supervision, and persons appointed as trustees who accept the position are responsible in making investments to the courts. If the trust fund experiences losses from investments that were legal for the trustee to make, the latter is not responsible for the losses, and the fund alone suffers the consequences. Should a trustee, however, exceed his authority, and invest otherwise than prescribed by law, he becomes responsible to the trust fund for losses that result from such investments. Trust companies and banks, as well as individuals, may administer trusts. Their fees, rights and privileges are fixed by state laws. Altogether, trust funds form a large part of the capital represented in investments, and trust estates are among the largest purchasers of investment securities.

Commercial Banks as Investors.—Ordinarily, commercial banks, *i.e.*, banks of deposit and discount, are not large purchasers of investment securities. Their function is chiefly to receive deposits and furnish loans to their clients or customers. Unlike savings banks, commercial banks both receive and lend funds to the same individuals or concerns. Thus, their depositors become borrowers and borrowers, depositors. Commercial banks, moreover, must limit their investments largely

to loans or purchases that are readily liquidated without the probability of heavy losses. For this reason, commercial banks limit their purchases largely to negotiable instruments which become due and payable within six months or less. Many commercial banks also lend on pledges of collateral comprising corporation shares or long term obligations, but it is generally provided in such loan transactions, that if the collateral declines in market value, the bank may call for additional pledges of value, or it may sell the collateral in the open market to satisfy or close out the loan. Consequently, securities serving as collateral for commercial loans generally must be of a marketable class, the market value of which can be readily determined at any time.

Commercial banks aim to keep as much of their deposits profitably employed (*i.e.*, earning income) as permissible under the banking laws and regulations. Accordingly, when the demand for commercial loans by manufacturers and business men is slack, the banks frequently buy high grade income-bearing and readily marketable securities repayable only after long periods, but to hold as investments only pending a revival of demand for loans on the part of their customers. During dull business periods, therefore, the commercial banks and trust companies are quite a factor in the general investment market. Thus, on December 31, 1924, the reporting banks in the Federal Reserve system held stocks and bonds (investments), other than United States Government bonds, amounting in book value to \$2,885,541,000. This represents an increase of \$644,726,000 or 29% over the amount held at the end of the previous year. The increase may be ascribed largely to the slackness in the demand for loans from banks compared with the growth in the funds left to them by depositors. When making temporary purchases of marketable long term investments, the banks may count on a profit from increased value of principal as well as the current income received therefrom.

Insurance Companies as Investors.—Insurance companies, as a group, are the largest purchasers of securities in America. Although subject to laws and regulations regarding their investments, insurance companies are not so severely limited as savings banks and trustees in the character and kind of securities that they may purchase. Life insurance companies, under the New York law, are now prohibited from purchasing shares representing participation in proprietorship of corporations, but have the choice of a wide range of investments in other classes of securities. A law enacted in 1922, also permits life insurance companies in New York to construct, own and operate apartment houses and residences for investment purposes. Fire and casualty insurance companies generally are not specifically restricted to any classes or kinds of security investments, other than that the securities acquired must be those of solvent concerns that are meeting their obligations. Fraternal organizations and other cooperative societies conducting insurance are in many states placed under the same restrictions regarding their investments as other insurance organizations of similar scope.

Educational, Religious and Charitable Institutions.—These, like insurance companies, are large purchasers of investments. Unlike savings banks, trustees and insurance companies, however, they, unless specifically restricted by law or by regulations imposed by donors, supporters, or other authority, have considerable freedom in making investment commitments. They may become actual owners of real estate and leaseholds, may acquire participations in proprietorship of corporations and may hold the obligations of individuals, corporations, municipalities and national governments. As the amount of wealth devoted to educational, religious, scientific and charitable purposes is constantly increasing, the institutions performing such functions are becoming more important purchasers of investment securities.

Business Concerns as Investors.—Many business concerns at certain seasons of the year accumulate cash funds not immediately required in business. These funds seek temporary investment. It is quite a common practice for large corporations, when they have cash on hand in excess of immediate requirements, to arrange with banks to take over these funds as time deposits bearing special interest rates. When commercial interest rates are low, however, the banks are not desirous of thus holding deposits under a fixed expense, so that business concerns in seeking to keep their cash reserves profitably employed occasionally purchase securities in the open market. This practice, however, is not sufficiently large to form an important factor in the securities market. Moreover, conservative business concerns as a rule avoid investing temporarily in securities that fluctuate in value, and on which they are liable to loss on principal, should they be forced to sell to realize cash.

Business concerns as investors should be distinguished from the class of corporations known as "holding" companies. The latter, as a rule, acquire securities not only for the income return received therefrom, but also for the purpose of exercising administrative control over the companies whose securities they hold. These holding companies have become quite prominent during the last quarter of a century. As owners of securities, however, they confine their commitments largely to participation in the ownership of other business corporations, for purposes of administrative control as well as for income. Such stocks, when acquired, are frequently pledged as collateral for the holding company's own obligations. Holding companies, accordingly, play but a small part in the actual absorption of general investment securities that are publicly marketed.

The Investment Trusts.—In European countries, particularly in Great Britain, there has been developed an investment

institution commonly known as the investment trust. This institution has some of the attributes of a holding company and of a savings bank. It resembles a holding company in that it purchases securities for permanent investment, but, unlike the holding company, the purpose of such purchases is not the acquirement of administrative control. The investment trust may also perform the functions of savings institutions in distributing its own obligations among people of small means, giving them as a protection not only the securities represented by investment of the funds received from the sale of its obligations but, in addition, the capital supplied by its own shareholders, together with surplus reserves held against possible losses. Investment trusts, however, do not receive deposits and are not under agreement or obligation to return to holders of their obligations the sums advanced, as savings banks do in the case of deposits committed to them.

The investment trust originated on the European continent after the Napoleonic period. It received its greatest development in Great Britain, however, and particularly in Scotland. The earliest Scottish trusts aimed to reduce the risk in carrying investments in foreign securities which yielded a larger income than domestic investments, by scattering purchases among the investments originating in various countries. In this way, an individual purchasing shares or obligations of the investment trust in view of the diversity of the securities held by the trust would not be taking the risk of losing a large part or his entire capital, in case some of its holdings proved worthless. The general scheme of the Scottish investment trust was for the most part successful, with the result that it was applied to holdings of domestic as well as foreign obligations. The shares as well as the bonds of these companies became popular with investors, and dealings therein became common on the London Stock Exchange. In 1924 there were more than 150 of the British and Scottish investment

trusts whose issues were listed (*i.e.*, sold) on the stock exchanges in London or in the principal Scotch cities.

Following the end of the European War, and largely due to the popular investment stimulation arising from the Liberty Loan campaigns, a movement developed to promote and establish investment trusts in the United States. Most of such organizations, up to the present, have been created in the interest of stock jobbers or promoters, who seek to reap profits from their promotions rather than having in view the best interests of investors. The American so-called "investment trusts," moreover, in most instances, lack the principle of sound investment diversification, which is the fundamental basis of the British investment trust.¹

Individual Investors.—Individual or private investors numerically are the largest group among investors. They also constitute the purchasers of the most varied classes, the high grade, well secured kind, as well as the most speculative. Accordingly, the largest market for the speculative securities is found among individual investors. Although, as already pointed out, it is difficult to classify individuals into investors' groups because of the numerous ranges of individual fortunes and the great variety of conditions and circumstances affecting individual incomes, the following tentative classification may be helpful:

1. Capitalists, with large fortunes desirous of accumulating additional wealth, through profitable investment.
2. Retired business and professional men, widows and others desirous of assuring themselves a steady income during old age.

¹ For a discussion of diversification, see pp. 45-49. Because of the questionable character of several of the newly organized American investment trusts, the New York Stock Exchange in 1924 adopted the following resolution:

"That participation by a member of the Exchange or Stock Exchange firm in the formation or management of investment trust corporations or similar organizations which in the opinion of the Governing Committee involve features which do not properly protect the interests of the investors therein may be held to be an act detrimental to the interest or welfare of the Exchange."

3. Active business and professional men who invest as a supplementary source of income or with a view to building up an estate.
4. Speculators, who purchase securities largely with a view to increase in capital rather than a steady income.

REFERENCES

- Institutional Holdings of Securities*. Issued annually. Published by Institutional Holdings Company, New York. (Contains the investment holdings of insurance companies, savings banks and other institutions classified under names of securities.)
- KIMBER'S *Record of Insurance Company Security Purchases*. Issued annually. Published by the Exporters Encyclopedia Company, New York City.
- MOULTON, HAROLD G. *The Financial Organization of Society*. (Chap. XV), Chicago. The University of Chicago Press, 1920, 789p.
- ROBINSON, L. R. *The British Investment Trust*. U. S. Foreign and Domestic Commerce Bureau, Department of Commerce, Washington.
- SPEAKER, LAWRENCE M. *The Investment Trust*. 1924, A. W. Shaw and Co., 112p.
- ZARTMAN, LESTER W. *The Investments of Life Insurance Companies*. New York, Henry Holt & Co., 1906, 259p.

CHAPTER IV

FUNDAMENTAL PRINCIPLES

Investment Principles and Investment Policy.—In considering what are known as the “fundamental principles” of investment it should be borne in mind always that these principles though of considerable importance are not those of an exact science, nor even of an art, since practical investment has no fixed rules or definite methods of procedure. As was shown in Chapter I modern investment is merely one of the incidental manifestations of civilized mankind’s economic activities—a product of the capitalistic system, by means of which the human necessities and comforts of life are provided.

The background of all modern investment is the law of contract and the confidence or the ability to fulfil or compel the fulfillment of obligations. Indeed, confidence in the performance of promises and agreements underlies all credit transactions, of which investment is but a part. Investment and credit as economic concepts are inseparable.

As credit transactions are constantly changing in character and vary with different political and economic conditions, or with changes in laws, customs, and national characteristics, any endeavor to adapt investment principles strictly to mathematical formulas, or to scientific dicta is futile. All that can be done is to point out the principles which should prompt individuals and institutions in the choice of investments. Investment principles, moreover, should not be confused with investment policy. The latter is not concerned primarily with investments, but rather with the investor’s welfare. In other words, investment principles are applied to the instruments of investments—*i.e.*, the securities, “choses in action,” or whatever they may be designated, whereas investment policy has ap-

plication to the needs of individual investors. Investment policy, accordingly, varies in individual cases. The "principles," if worth anything at all, should have a general application. As individual investors' demands naturally differ, what might be considered a good investment for one, may be wholly unsuited to another. For this reason, it is obviously difficult to draw up a set of rules of general application to all investors, or even to rate individuals' investments by any "key system," or to classify investors into separate and distinct categories.

The Two Fundamental Principles.—There are two chief considerations relating to an investment (1) the security of principal, and (2) the security of income. The security of the principal implies the degree of certainty of the sum of money surrendered being returned or recovered. Such sum of money is termed the "principal" of the investment. In addition to this expected return of the principal, an investor demands further payments, usually in the form of a fixed periodical income, known as "interest," "income," "yield" or "dividend," in accordance with the nature of the investment instrument. The surrendering of property to the use of another without the increment of income is not an investment, but a gratuity, or, as it is commonly termed, an "accommodation." Accordingly, nothing constitutes investment which does not imply the recovery of both the principal sum and also an additional amount or amounts representing income or profit. It may be mentioned here that an annuity, whereby one pays over a lump sum, to be returned in instalments over a period, without obligation to repay principal is not generally considered an investment for the reason that there is usually neither a profit involved nor any purpose to make a profit.¹ Keeping these principles constantly in mind will greatly assist students in the study and analysis of the various forms of investments.

¹ Government perpetual annuities, mentioned in Chapter XIV, are not considered as life or limited annuities such as are referred to here. The former are investments because they are negotiable and have a market price at any time, thus furnishing a basis for repayment of the principal.

To secure the return of the principal it is not essential that the borrower or debtor should agree to repay the loan at any particular time. In other words, it is not necessary for a debt to have a maturity date. Thus, many French Government bonds are perpetual, since there is no agreement to redeem them at any time. The return of the principal in an investment of this kind is obtained, however, through the negotiability or marketability of the security—*i.e.*, an investor is enabled to dispose of his commitments through sale and receive back value for the sum surrendered. He need not, therefore, be concerned with the due date of bonds or other types of investments he may hold. As long as the investor can transfer for value the evidence of ownership or indebtedness he holds, there may be ample security of principal.

Safety of Income a Prime Consideration.—Although the two fundamentals, *vis.*: security of principal and security of income, as stated in the preceding paragraph are separate and distinct in their practical application, they are essentially the same. If safety of principal is solely considered, the transaction, as already pointed out, is not of the nature of an investment, since the primary purpose of investment is income or profit. On the other hand, if there is "safety of income," from the very nature of investment, there will be safety of principal. When income is secure, and can be transferred (*i.e.*, is negotiable) it will have a "capitalized value." By this is meant that the right to the income can be acquired by the present payment of a cash sum. The cash sum, though in actual practice it may differ from the sum surrendered by an individual investor, is technically and theoretically the principal.

The purchase for investment purposes of perpetual land leases or fixed ground rents has been common in England for centuries. It has prevailed in Maryland since colonial times. The certainty of income, and the negotiability of these leases place them among the highest grade of investments, and

their market value is determined by the prevailing rates of income demanded for the use of capital for long periods of time. Similarly, the French Government's perpetual loans (*rentes*) formerly commanded a high value in relation to the annual income afforded to their holders. Their popularity has been enhanced rather than depressed by the fact that neither the debtor nor the creditor has a right to a final settlement of the principal.

A large part of existing investments consists of shares representing proprietorship in business enterprise. As a rule, these investments are not intended to be liquidated by the repayment to the holder of the principal amount advanced. The security of the principal of this large class of investments is based upon the income-producing factors or the availability of property or commodities which may be converted into cash in the event of the liquidation of the enterprise.

Responsibility of Borrower or User of Investment Funds.—Of the factors entering into the security of principal, the foremost is the financial responsibility of the borrower or user of the funds advanced. Both present and potential financial responsibilities are important considerations. The amount of the borrower's wealth and its availability to meet the principal sum when due are the gauges for determining the degree of the security of the principal. Proper use of borrowed funds is another factor the lender must consider. If a person goes to a bank to borrow money, the banker usually inquires as to the use to which the money is to be put. If the banker is told that the money is desired for playing the races or for other illegitimate purposes, he is very likely to refuse the request unless he is given a pledge or collateral on which he can realize the value of the sum advanced, independently of the borrower's capacity to pay. Without collateral, the banker must have full confidence that when the proposed loan comes due the borrower will have sufficient wealth on hand to pay the indebtedness.

The use to be made of the wealth furnished the borrower is, therefore, frequently an important factor in determining the security of principal.

It is not sufficient for the borrower merely to have resources with which to pay the loan. There should be some means of enforcing or compelling him to pay. Hence, many investment securities have what is known as a "mortgage," or a pledge of property, back of them. The purpose of a mortgage is to insure performance of the borrower's obligations. In case of default or bankruptcy of the borrower, the mortgage, or pledge, gives the lender, *i.e.*, the investor, a preferred claim on property as against other creditors. In substance, he has authority to make a legal seizure of property and dispose of it to satisfy the loan. The conditions of the mortgage are scrutinized very carefully in studying the merits of various classes of investments. Most American railroad bonds are mortgage bonds. Bonds which have no mortgage security are known in the United States as "debentures," or plain "bonds." The distinguishing characteristics of these two classes of securities are discussed in detail in a later chapter (Chapter VII).

Durability of Assets.—A further element in the security of principal is the permanence or durability of the assets which are pledged directly or indirectly to secure the investment. If a person is loaned \$10,000, with the agreement that he pay it back in twenty-five years, and the only security he gives is a pledge of a frame building with no provision requiring that it be kept in repair and in as good condition as when the money was loaned, the lender may find no value at all to the security at the end of the twenty-five years. Hence his principal may be lost.

A careful investor demands that provisions be included in the mortgage to guard against future losses of value. For this reason, most loan agreements secured by a pledge of property

as well as unsecured loans contain provisions requiring maintenance and repairs, and insurance against accidents, fires, floods, and other contingencies. In this way, the investor, though not having the right to take possession and control of the pledged property, is given some indirect means of protecting the principal of his investment. This matter will be discussed in more detail in Chapter VII

Negotiability of Assets.—Another element in the security of the principal is the character of the property safeguarding the repayment of the investment. The property should have what is known as “market value,” or marketability. In other words, the property or assets should be readily transferable. This does not mean that pledged assets should always be of a nature to command ready purchasers and be instantly disposed of, though in some cases as in ordinary short term business loans it may be desirable that the pledged security be readily salable commodities or goods.

The great mass of physical property in use has no fixed or definite market value that may be determined from day to day, by reference to current price quotations. Yet such property has an investment or “capital” value, particularly if the assets are capable of profitable employment. A railroad, for example, cannot be said to have market value, because if it fails to repay the principal on its secured indebtedness, it cannot be carried off, or broken up and sold. But if the property has good earning power and is in good physical condition, there is likely to be some person or group of persons who will assume the loan and become responsible for the payment of the principal. The cost of fixed property or its appraised reproduction value should not be confused with its investment value. The fact that one piece of property originally cost more than another or has a greater reproduction cost does not mean that it has a greater value as an investment.

Marketability as an Element Securing Principal.—On page 32 it was pointed out that it is not essential for an investor to have a promise that the capital he surrenders be returned to him at a certain date or at any future time in order to make secure the safety of the principal. It is essential to safety of principal, however, in such cases, that the investment (whether a loan or the acquisition of a claim of proprietorship, such as a share of stock) should have both *negotiability* and *marketability*. The fact that most investments are negotiable, and can be transferred by mere delivery or by endorsement, underlies their marketable qualities.²

Listed and Unlisted Securities.—The importance of security exchanges as a factor in the development of modern investment was pointed out in a previous chapter. Their main advantage in investment is the marketability afforded to investment. Not all investments, even those having prime marketability are "listed" (*i.e.*, sold) on organized security exchanges and many securities which are listed are negotiated more frequently off than on the exchange. Nevertheless, listing (*i.e.*, permitting a security to be bought, sold and quoted) on a stock exchange has several important advantages. In the first place, it furnishes an open public market, on which "bids and offers" are registered and can be generally obtained at any time during trading hours. In this way, the investor knows the security value in the same way as a cotton grower or wheat farmer knows the market price of his product. Secondly, the marketability afforded by current quotation of a stock exchange assists in giving an investment a "hypothecary value." By this is meant, that a "listed security" is more readily taken by banks and money lenders as pledges for re-

² On page 19, of Chamberlain's *Principles of Bond Investment*, the statement is made that demand loans and bank deposits, when considered as investments, have the highest degree of marketability. In this statement, Mr. Chamberlain confuses convertibility into cash or the actual right to the return of the sum advanced with marketability. In the call loan and the demand deposit, the option is given both the borrower and the lender to close the transaction by merely giving customary notice of intention.

payment of loans. The holder of the security, therefore, can more readily obtain cash by pledging his investment, and in this way, may avoid the necessity of disposing of desirable investments in an unfavorable market or when temporarily in need of cash. Similarly, banks, insurance companies and business concerns which from time to time invest their surplus or idle funds, prefer securities which are regularly quoted on a public exchange.³

From their very nature, many of the most popular forms of investments are not readily marketable by public negotiation. The so-called "commercial paper," consisting of short-term obligations of merchants, manufacturers and others, is not bought or sold on public market places in the United States.⁴ Investments of this character are generally known as "discounted obligations" (*i.e.*, obligations purchased at a discount or reduction below the face value), the market price of which is determined by the current discount rate on short-term loans as well as by the financial soundness of the makers of the obligations.

Real estate and real estate mortgage loans likewise have no public market place. Buyers and sellers of this class of investments are brought together through brokers or other intermediaries, as, for example, banking institutions and mortgage companies. As will be shown in a later chapter, real estate and real estate loans have not the marketability of most corporation bonds and stocks. This, however, is not due so much to the absence of a public exchange for their negotiation as to the nature of the investment itself.

Several important classes of investments constituting in-

³ Another advantage frequently attributed to listed securities, is that the exchange authorities of some of the exchanges require certified statements of the history, purpose and financial condition of the companies or countries whose securities are desired to be "listed." This is generally an over-rated advantage, however, since the information furnished, as pointed out by Chamberlain, is not as detailed or thorough as compared with the intimate knowledge any bond house must have of the condition of a company whose obligations it purchases. See also Chapter XX.

⁴ There is, however, a so-called "open market" for certain kinds of commercial paper both in New York and in London. See Chapter on "Commercial Paper as Investments."

come-bearing obligations of long maturity, are not generally listed on exchanges. Among these, are state and municipal obligations. Probably the principal reason for not "listing" these is the inability or unwillingness of states and municipalities to submit to the "listing" formalities and requirements. Another reason that has considerable weight is that the bulk of the individual issues of municipal obligations are for relatively small amounts, or each issue comprises maturities of varying dates, thus necessitating separate quotations for each maturity. All this handicaps public dealing in securities on an exchange.⁵

The fact that a security is listed or quoted on an exchange does not necessarily give it immediate negotiability or marketability, nor does it make it readily acceptable as loan collateral. Of the great bulk of the numerous stocks, bonds and other securities that are "listed" on the New York Stock Exchange, only a small proportion are actively dealt in from day to day. In many separate issues, there are no transactions from one end of the year to the other, and in instances where "bids" and "offers" are reported, the margin between the two is so wide that there is no basis for a measurement of market value. Moreover, unless a security is actively traded in, the "bid" and "offered" prices as registered on the "board" of the Stock Exchange are more likely to be the result of manipulation of brokers or others interested in setting a price on a security, than the effect of natural forces which create market value.

An essential to insuring marketability to investments is large volume of the particular obligations or other security represented by the investment. The amount involved, in other words, should be sufficiently large to afford a distribution among individual holders. The distribution itself, moreover, must be sufficiently broad at all times to have some holders who are willing to sell at a price as well as persons who are willing to buy. Many "listed" investment securities, of very

⁵ See in Chapter X.

sound character, are held in large lots chiefly by financial institutions. This circumstance affects marketability in that it renders such securities "inactive" on the exchange. Inactivity, however, does not necessarily lead to lower price than an active issue of the same class,⁶ but it does limit to a greater degree the amount that can be marketed at one time, and generally causes wider disparity between the registered "bid" and "asked" prices.

With the development of investment banking houses, and brokerage firms specializing in the merchandising of investments, there is today less dependence on public exchanges for the negotiation of investment securities. "The great system of American bond houses is really an immense exchange in itself."⁷ This system, with the aid of telegraph and telephone, fulfils for most purposes the legitimate functions of an investment exchange. Its effectiveness is indicated by the fact that more than three-fourths of transactions in bonds that are listed on the New York Stock Exchange take place "over the counter," *i.e.*, by private negotiation, and not by public bid and offer on the floor of the exchange.

Security of Income.—High rate of income and security of principal do not go hand in hand. They are frequently inversely related. The periodical income received by the investor is generally larger when the security of principal is meager than when it is very firm. Investment income ordinarily represents two elements of compensation; one element, called "pure interest which constitutes the reward for surrendering the use of the money"; the other is known as "compensation for risk." Naturally, the greater risk that an investor takes when making a loan, the more income he demands to cover this risk.

⁶ This may be illustrated by reference to the price quotations of the Michigan Central Railroad stock, of which \$16,819,300 of a total amount of \$18,736,400 is held by the New York Central Railroad. During 1923 only 100 shares of this stock was sold on the New York Stock Exchange.

⁷ Chamberlain, *Principles of Bond Investment*, page 66.

Stability of Interest Return.—It is important in studying an investment to determine the *permanence* or *stability*, as well as the amount, of the income to be received. Most people loan money in order to get a fixed periodical income from it. The best assurance of receiving this is the steadiness of the earnings and profits of the borrower. An investor who lends money to a railroad that fails to make a profit on its operations is generally unwilling to wait for his income return on his investment until its earnings improve or to accept a promissory note in lieu of cash income. The income is payable in cash or its equivalent, so that the railroads must earn a profit recoverable in cash over current expenses to pay the interest or be able to obtain it by other means. If the company fails to earn over a period of years sufficient to pay its current expenses and regular interest charges, there is usually an impairment of confidence on the part of the investors that have furnished funds to a company. A concern in this position finds it impossible or exceedingly difficult to sell its securities in the market because the majority of investors demand regular periodical income and will make commitments only in companies that have met their interest obligations over a period of years.

Maintaining Stability.—Back of this question of income stability on investments lies the important distinction between bonds and stocks as investments. In the case of bonds the essential query is, "Has the lender or holder of the bond some right or power to demand and enforce the payment of the income by the debtor corporations?" In the case of stocks, there is usually no such power, and, as a rule, the stockholder is less sure of his income than the bondholder. A great many investors neglect the fact that a stockholder is only a proprietor and cannot enforce the collection of his investments; whereas the bondholder usually has some power either to enforce the regular payment of income or claim the return of the principal.

Whether the bondholder can personally and without legal assistance exercise that power, is another matter to be dealt with in later chapters.

Taxation.—Stability of investment income is affected by the taxes imposed upon this income. Whenever the holder of a security is taxed on the income received therefrom, he is deprived of a part of this income. Hence, when making a purchase of an investment security, he is never sure of the income he is to receive because the tax rate can be changed from year to year. This is the reason why many investors prefer tax-exempt bonds, *i.e.*, bonds the income from which is not taxed. Such bonds furnish a greater certainty of income. Tax exemption in these days of high income taxation is a very important factor in the selection of investments. Its direct significance in relation to the various classes of investments will be discussed in subsequent chapters.

REFERENCES

- CHAMBERLAIN, LAWRENCE. *The Principles of Bond Investment*. New York, Henry Holt & Co.
- KIRSHMAN, JOHN E. *Principles of Investment*. Chicago, A. W. Shaw & Co., 1924, 902p.
- LAGERQUIST, WALTER E. *Investment Analysis*. New York, The Macmillan Co., 1921, 792p.

CHAPTER V

DERIVATIVE PRINCIPLES

Classification of Secondary Principles Difficult.—The incidental factors of sound investment so ably presented by Lawrence Chamberlain¹ are concerned more with investment policy rather than with the intrinsic merits or qualities of the securities themselves. Investment policy and procedure are dependent largely on transitory circumstances. They are matters regarding which it is exceedingly difficult to lay down general rules and even more difficult to apply in actual transactions. The classification of investors into groups or categories has not progressed sufficiently to permit the application of hard-and-fast rules as to what issues should be taken on or what avoided by any one group. Evidence of this is the partial failure or inadequacy of the national and state laws limiting the investments of savings banks, trustees, insurance companies and other fiduciary institutions, a matter reserved for discussion in future chapters. If investment rules, maxims, adages and formulas can be developed, they will not differ, in the long run, from the principles which guide business men in their activities to provide human needs and services for their individual gain. The minimizing of risks on one hand and the enlargement of rewards on the other, whether in the form of profits or of income, are the foundation stones of modern business progress.

Freedom from Care.—As investors generally lose control of funds surrendered by them in return for income, and as they who pay for the use of investment funds desire a reward for themselves in addition to what is paid for the use, it is logical

¹ *The Principles of Bond Investment*, Ch. VII.

to expect the investors' income to be smaller, all things considered, than that of the entrepreneur. But, in view of this smaller return, the investor desires and should be relieved of much of the care that is involved in business operations. The degree of the relief, other things being equal, is proportionate to the reduction in the return. Accordingly, the investments commanding the highest prices in relation to income are those which require the least labor and care in their handling, in their negotiability and in the collection of the return.²

Acceptable Denomination.—By acceptable denomination is meant a par or face value of a single investment instrument, which renders it convenient for the purchaser or large classes of investors. Little can be added to the discussion of this important feature contained in Mr. Chamberlain's treatise. As he points out, "In academic discussions of investment virtues, the importance of denomination is seldom duly emphasized." However, the matter is constantly receiving more attention in financial circles. Savings institutions have come to accept smaller and smaller minimum deposits, and the terse invitation that "One dollar will open an account" is now used by the savings department of the largest bank in America. Liberty Bonds were issued in as low as \$50 denominations, in order more widely to distribute the issues, and, at the same time, large denominations were provided for the more affluent citizens, who desire to avoid the labor and inconvenience of cutting many coupons or of paying for extra safe-deposit space.

Notwithstanding the advantage of varied denominations of investment instruments, particularly bonds and stocks, in affording wider marketability, there are certain valid objections to the issue and sale of securities of very small or unusually large denominations. An issue of commercial paper, bonds or stocks in small denominations (*i.e.*, in amounts ranging from \$5 to \$100) entails extra expense both in the flotation

² For further discussion of this subject see Chapter X on the "Mechanics of Investment."

or in the handling of investment funds. The cost of furnishing engraved certificates not readily counterfeited, the additional expense of proper certification and of registration, are in many cases considerable. Moreover, the trading rules on a number of exchanges place a limit on the minimum amount which may be negotiated in one transaction, and a denomination smaller than the minimum may not be acceptable in the sales contract. Accordingly, smaller denominations are designated as "odd lots" and sellers of these are frequently required to accept lower prices, whereas the purchasers must pay a higher price. This may be due either to relatively higher brokerage fees for negotiating small denominations, or to the necessity of sale to "small lot" dealers instead of a sale made through brokers directly to investors. Thus, the rules of the New York Stock Exchange make \$1,000 the minimum trading amount in bonds, and 100 shares the trading unit in stocks. Smaller denominations in bonds or smaller number of stock shares are bought and sold to "odd-lot dealers," a special group of Stock Exchange members who pay a price under the market when they buy or charge above the market when they sell in amounts less than the minimum that can be negotiated on the floor of the exchange.³

Potential Appreciation.—The expectation of appreciation in the market value of an investment is an element of speculation. It is, therefore, incidental only to the prime motive of investment—the securing of income. Yet the possibility or likelihood of appreciation is closely related to the inherent qualities of all sound placement of capital funds. It is a factor

³ In the leading European financial centers, the amount of investment securities of small denominations is much greater relatively than in the United States. The quotations of the small denominations generally vary from the quotation of the standard denomination. In some cases, such as government bonds, the certificates of which are of the same size as the large denominations, the market price of the so-called "small pieces" is considerably under that of the larger denominations. This is particularly so when the certificates of small denominations are not convertible into larger units. The marketability of the small denominations may be further limited through the inability or neglect to list these certificates on the exchange. Thus, the "small pieces" become "unlisted numbers" and, as such, are not "good delivery" on sales contracts executed on the floor of the exchange.

relating to the safety of income in much the same way as is tax-exemption. Increase in market value, though legally and theoretically an increment of the principal, is commonly regarded as income or profit. At least, this is the ruling in income taxation. Moreover, safety of principal is enhanced by market value appreciation. Investing in securities that are negotiable and continuously marketable at or above the first cost to the investor may really be said to give the investment the character of a "demand loan." It enables a commitment to be recalled without capital loss, and with only the sacrifice of expected future income. In the long run nothing affords a better basis for potential appreciation than the safety of the income, and of the principal. It is true that large speculative profits may be gained from the purchase of securities which temporarily lack these two qualities, but in transactions of this nature, the potential gains are usually offset by the risk of as great or greater losses. The fundamental purpose of investment (*i.e.*, periodical and steady income), is, therefore, lacking, so that the purchase or sale of investments with a view to capital gains through appreciation in market value differs essentially from the permanent placing of funds in credit instruments which are expected to have a higher market valuation merely as an incidence of the transaction.⁴

Diversification.—Diversification of investment is purely a matter of investment policy, and has little, if any, connection with the inherent qualities of the instruments of investment. Because the problem is one of policy, it is difficult—in fact, almost useless—to lay down general rules applicable to all cases of investment. The doctrine of the distribution of risk is common to all business transactions, and is at the basis of the activities of the two leading institutions of finance—the banks and the insurance companies. Diversification, therefore, goes

⁴ A security purchased at a discount (*i.e.*, under the face value of the principal amount) that increases in market value merely because of the approach to its maturity date, theoretically does not *appreciate in value*. This is discussed in Chapter X, dealing with bond values and income yield computations.

hand in hand with risk distribution. It does not mean, as is sometimes indicated, that an individual investor should spread his investments partly among sound high grade securities, and partly among more speculative commitments. It does not mean moreover, a spreading of investments among widely scattered groups or in many types of business. There are some classes of business enterprises which should be avoided altogether by careful investors and others which, though engaged in a speculative or unstable industry, conduct their affairs in such a manner that they are not affected by conditions involving the integrity of the others.⁵

Diversification, in essence, is nothing more than selecting investments in a way that influences affecting market values or intrinsic merits, to which one or more are susceptible, will not spread to or involve the whole commitment. In other words, investments should be selected in the same manner as fire insurance companies place their policies. If a building is abnormally susceptible to fire risk, the insurance company generally refuses to underwrite the fire loss or, if it does so, the premium charged is extraordinarily high. Furthermore, a structure may be as safe from a fire hazard as humanly possible, but if the company is already carrying heavy risks on other structures in the same neighborhood which are likely to be affected by a single conflagration, the risk will be avoided.

The full advantages of diversification are rarely gained by individual investors other than the wealthy class. Savings banks, insurance companies, trust estates and others handling large amounts of capital funds have facilities for effecting diversification. These institutions can carry eggs in many baskets if they are equipped to "watch all the baskets." The individual investor of ordinary means rarely has these facilities, so that extreme diversification because of inability to watch all his separate commitments, may result in losses rather than

⁵ At this writing electric traction companies are widely regarded as poor investment propositions, yet, in individual cases, where these concerns have developed freight and terminal business, they are highly profitable with promise of further progress.

gains. Although little has been accomplished in the United States to afford small individual investors the benefits and protection of diversification in Great Britain, as already pointed out on page 26, the *investment trust* has been well organized and developed for this purpose. The underlying aims of the investment trust are the diversification of its security holdings, and the extension of opportunity for small investors to put their funds into enterprises which would otherwise be closed to them. These aims are accomplished by virtually pooling funds obtained from investors and using them to purchase a wide variety of offerings, the investors having a ratable interest in the assets and income of the trust, proportioned or adjusted to the class of its shares or obligations that he holds.

The properly managed investment trust, to carry out its purposes, must be operated in the interests of the investors represented by its share and debenture holders. These should be protected against attempts to mingle bad with good investments. The managers of an investment trust, in the nature of the case, should be equipped with powers of discretion in acquiring securities, in paying dividends, and in allowing for reasonable expenses of operation. Adequate reserves, to offset possible losses, should also be provided. Moreover, to keep their shareholders informed of their operations, the investment trusts should publish at frequent intervals comprehensive reports concerning their security holdings, their earnings, and their operating costs. The directors should be guided by the advice of expert advisory boards, such as control the savings banks and insurance companies in their investment activities, and not be influenced by desire for personal gain or "stock jobbing" opportunities.

It may be remarked that, in the United States, the savings banks have performed to some extent the functions of the British investment trusts. There is, however, one important distinction between the two institutions. The savings banks obtain the bulk of their funds from one source only, namely,

deposits. Each depositor receives the same rate of interest on his deposits as the others. The depositors also as stated on page 22 have the privilege, subject to legal limitations, of demanding the return of their funds on deposit. In the case of investment trusts, the capital funds are obtained through the sale of obligations or shares of the organization itself. These securities are circulated in the same manner as other investment securities, and the holders are restricted to the rights and claims as designated in the written instruments. In this way, individual investors desiring a large safety of income, can purchase the class of obligations of the investment trust having a first claim on its assets and income, but limited to a low rate of periodical income. Others, desiring more speculative securities, can purchase the shares of the investment trust which affords no definite promise of income but which may claim or receive residual earnings without prescribed limit. Some of the British investment trusts have issued as many as five classes of securities. On the whole, these organizations have been successful, inasmuch as they have been created and managed by experienced bankers and financiers whose knowledge of investment and business affairs has assisted them in making profitable investments and in shifting their holdings so as to realize additional increments of capital without sacrifice of income.

As stated on page 27, there has been a growth of general interest since the close of the World War in the investment trust in the United States. It was with a view to conserving such interest and preventing it from being destroyed, that in the summer of 1924, as already stated, the New York Stock Exchange adopted a resolution prohibiting its members from engaging in the organization of so-called investment trusts through undesirable methods. A number of these investment trusts in the United States have been organized mainly for the purpose of promoting speculation and manipulation rather than for investment purposes. Others, however,

have been created from the same viewpoint which led about a half century ago to the creation of the British and Scottish investment trusts, which are reputed to have successfully accomplished their legitimate aims.

The most successful of the British investment trusts adhere fundamentally to the idea of careful selection of diversified securities, with a view to averaging risks which cannot be guarded against by investigation. To substitute for this idea proposed opportunities to participate in joint "pooling" and other speculative operations, is to misuse the original plan of the investment trusts.⁶

REFERENCES

(See Chapter V.)

⁶ For an excellent short discussion of recent American investment trusts as contrasted with the earlier British concerns, see Russell D. Kilborne "American Investment Trusts" in *Harvard Business Review*, January 1925, pages 160-170; also *The Federal Reserve Bulletin*, Vol. 7, page 64.

CHAPTER VI

THE FIELD OF INVESTMENT

Classes of Credit.—In the preceding chapters, the development and fundamental principles of investments were discussed. The more concrete topic, the field of investment, will now be treated. This involves a discussion of credit, because investment, whether the purchase of obligations (*i.e.*, *choses in action*) or shares (*i.e.*, participation in ownership), as already pointed out, is essentially a form of credit.¹ It has also been stated in previous pages that an investment involves the temporary transfer of value, which may consist of concrete goods, a fund of capital, *i.e.*, money or securities, or a mere right or privilege, and which, for purposes of exchange or transfer, is computed in terms of money. Almost all forms of credit likewise represent a transfer of value by one or more persons to the possession or use of others. There are two general forms of credit: commercial credit and investment credit. These are handled by the two leading types of banking institutions: *viz.*, the commercial banks, or banks of discount and deposit, and the investment banks. It is the function of both classes of institutions to furnish credit. The banks of deposit and discount are mainly concerned with commercial, or short-term credit. Investment banks, on the other hand, are concerned with long-term, or capital credit.

Commercial Credit Institutions.—The great bulk of the banking institutions of the country are commercial banks. These are frequently designated “banks of deposit and dis-

¹ The author is aware that some economists make a distinction between a “credit” and an “equity” or participation in ownership. The distinction from the practical investment viewpoint is, however, largely legal and theoretical as will be shown later. Many securities involve both the “credit” and “equity” principle.

count," for the reason that they receive deposits of funds, and at the same time, make loans through discounting commercial paper. The discount operation consists of buying a claim to a future payment. The claim is, of course, represented by a negotiable credit instrument, such as a promissory note, a draft or a bill of exchange.

When a client comes to a commercial bank for a loan, he is usually asked concerning the use or purpose of the loan. The reason for this is that the transaction for which he desires commercial credit should be of a self-liquidating character. It should be based on the purchase and sale of goods or services, or on the conversion of goods and materials into forms which make them readily exchangeable for cash. Thus, the main business of commercial banks is to grant loans to manufacturers and merchants. When a merchant borrows money to buy goods, he is generally expected to dispose of all or part of these goods during the period in which the loan matures. If a manufacturer borrows money to buy raw materials to turn into finished articles, he is expected to complete their manufacture and market them in time to pay off the loan when due. This, however, is not always required in actual practice. Certain manufacturers and merchants have with banks what is known as a "line of credit." They possess sufficient financial resources to be able to borrow for short terms on their general security. In some cases the borrower's general resources are the primary basis on which he gets a loan from a commercial bank while in other cases they are given second consideration. In connection with the latter, the bank generally demands special security, which is based on existing values (*i.e.*, commodities, goods or wealth) or it takes some form of guarantee that the loan will be repaid at maturity. In short, the purpose of commercial banking is to furnish borrowers the use of cash for the purchase, sale, or manufacture of goods which in a few months will be disposed of and reconverted into cash, the

basis of this short term credit being the borrower's liquid assets, or assets that can be readily exchanged for cash.

The national banks created under the National Banking Act are commercial banks. They, together with many state banking institutions of the same kind, are members of the Federal Reserve System dominated by twelve federal reserve banks which performs for other banks the same service as the latter furnish their customers. That is, each federal reserve bank grants credits to the member commercial banks in its district through advances or rediscounts of commercial paper which is based mainly on purchase and sale transactions or secured by actual commodities. These credits must have a maturity of not more than six months.²

Forms of Short-Term Credit.—It is the intention here to point out only a few of the forms of short-term credit. The primary type of short-term credit is the open account. This involves merely the transfer of funds or other values to another party with no other security than the statement in the ledger that such a loan or sale on credit has been made, or such a service has been rendered, for which payment will not be received until some future time. The open account is a very common form of credit in almost all lines of business. A good example of it is the bank deposit. A depositor puts money in the bank and receives in return the right to demand it at any time during banking hours. He is thus giving credit to the bank. The money on deposit becomes the property of the bank, the depositor merely having the right to claim from it an equivalent amount.

Another form of commercial, or short-term, credit is the promissory note. This is a written promise to pay a sum of money on demand or at a fixed date which is given by the borrower to the creditor. It is the commonest form of negotiable commercial credit in the United States, though a movement

² Certain kinds of agricultural credits may extend for a longer period.

has recently been started to curtail its use by substituting the so-called "trade acceptance," and "banker's acceptance." While not exactly like the promissory note, the trade acceptance is essentially a similar form of credit. It is an order of one party, usually the seller, on another party, the buyer, to pay the former or some third party, a specified sum at a specified time and place.³ The drawee or buyer usually indicates his acceptance of the order by writing the word "accepted" across the face and affixing his signature, thereby making himself liable on the draft. The bank acceptance is drawn directly on a bank, which agrees to pay the stated account. The bank accepts the obligation in return for a fee, thus lending its credit to a borrower, who usually agrees to furnish the bank with the funds at maturity to meet the obligation.

The use of the acceptance by banks in the Federal Reserve System is defined and limited by statute. This has brought into American banking practice an element of security from which the European institutions are generally free. British and Continental bankers are under no legal restraint in selecting the character of the transactions which underlie the bills of exchange they accept. American banks, on the contrary, act under charters which bestow upon them certain limited and delegated powers. Prior to the Federal Reserve Act, the power to accept drafts made upon them was not among the powers granted national banks; and it exists today only to a limited extent as defined by that Act and in accordance with the regulations and rulings of the Federal Reserve Board or the opinions of its counsel.⁴

³ The Federal Reserve Board has defined the trade acceptance as "a draft or bill of exchange drawn by the seller on the purchaser of goods sold, and accepted by such purchaser." The word "goods" as here used, means goods, wares, merchandise, or agricultural products, including live stock.

⁴ Under the provisions of Section 13 of the Federal Reserve Act, as amended, member banks are permitted to accept drafts or bills of exchange drawn upon them which, excluding days of grace, mature within six months. The accepted bill or draft also must fulfil at least one of the following conditions:

1. Have origin in a transaction involving the importation or exportation of goods, or

Relation of Commercial Credits and Volume of Currency.—Commercial credits, because of their short maturity and their background of commodities and other consumable goods readily convertible into cash, serve as a substitute for money. By means of commercial credit, currency is manufactured for the use of industry and the public as well. This is accomplished through the ready negotiability and convertibility of most commercial credits. As commercial loans are generally effected through advances made by banks to their clients, it results that whenever a bank makes such an advance or discounts a note or bill, it gives some one the right to draw a cheque upon it for the amount. In other words, bank loans are made not by directly passing over the cash, but by giving the borrower a credit for the amount on its books, and allowing him to draw cheques against this credit. These cheques serve as a medium of exchange in commercial transactions and consequently perform the function of money. Some banks, moreover, in granting loans, have the right to issue to borrowers their own negotiable notes, usually payable on demand, which also serve as currency. In the United States, both the national banks and the Federal Reserve Banks have this privilege which is exercised under the limitations imposed by the national banking laws.⁵

Long-Term or Capital Credit.—Long-term or capital credits comprise principally real estate loans and bonds, and, to some degree, shares of stock. Like ordinary promissory notes, long term credit instruments may be secured or unsecured. Thus, they may be secured by a pledge to the lender of valuable collateral, just as a three months' note may be discounted by a bank against the deposit of collateral in the

2. Arise from a transaction involving domestic shipment of goods and have shipping documents attached at the time of acceptance securing or conveying title to the goods, or

3. Be secured at the time of acceptance by warehouse receipt or other such document conveying or securing title to readily marketable staples.

⁵ See Chapter XVI on United States Government bonds.

shape of warehouse receipts, bonds and shares of stock. Or they may be represented by a simple certificate acknowledging the debt without any pledge of wealth or assets, and without specific claim against property. The subject is discussed in detail in Chapter VII.

Outwardly, therefore, a capital credit cannot be distinguished from a commercial credit. The duration and the purpose of the transaction are the distinguishing features. As a rule, commercial banks do not lend money for a period extending beyond six months. Long-term credit may, therefore, be considered as a transfer of value for an original maturity of more than six months. However, there is no fixed period of time by which commercial credit may be distinguished from capital credit. The duration of the credit is determined largely by the nature of the transaction underlying the credit. For example, when money is lent to a manufacturer to enable him to work up raw materials into manufactured goods, the period required for the process will be the term of the commercial credit. Credits running longer than a year are generally considered capital credits, though in some cases commercial credits extend for over a year.⁶

A more fundamental distinction between long- and short-term credits than mere duration is the purpose of the loan. When the borrowing is to acquire property of a permanent nature or to retain in a business additional capital for its operations, the resulting credits are essentially capital credits, regardless of maturity. Loans for such purposes, theoretically at least, are not negotiated by commercial banks for the reason that they are not self-liquidating—*i.e.*, they are not used to acquire goods or commodities that are to be sold and the value converted back into cash. Accordingly, specialized banking institutions have been developed for negotiating and handling long term or capital credits.

⁶ Commercial credits that are regularly renewed at each maturity (*i.e.*, "revolving credits") may serve the purpose of long-term loans.

Dealers in Capital Credits.—Investment banking institutions which are concerned with capital credits are, on the whole, a more recent development than commercial banks, though they are becoming of increasing importance. Originating in many cases, as private businesses, conducted by individuals or partnerships, they have been gradually taking on the corporate form of organization. There still exist in the United States, however, several of the larger and older influential private banking houses, such as J. P. Morgan & Company; Brown Brothers & Company; Lee, Higginson & Company; Alexander Brown & Son; Belmont & Company; Speyer & Company; Paine, Webber & Company; and others. These have their counterpart in Great Britain in the Rothschilds, and Coutts, the Barings and the Schroeders. Notwithstanding their entrenched position as "dealers in capital credits" (*i.e.*, investments) they now have powerful rivals in the large trust companies and commercial banking institutions, which during the last quarter of a century, have been entering the investment field on an ever increasing scale.

The state chartered trust companies were the first banking corporations to combine in their activities the commercial and investment branches of the banking business. The establishment of these institutions dates back about a century.

The first trust company chartered in New York was the Farmers Loan and Trust Company, founded in 1822. Though as their name implies, trust companies were originally intended to administer trusts and in a few instances to operate as life insurance offices, they gradually expanded into the broad fields of commercial and investment banking. The investment end of the business was a logical sequence of the execution of trusts, since this operation frequently involved the investment as well as the custody of funds. As promoters of industrial and commercial enterprises and as dealers in mortgages and investment securities, trust companies have become prominent only in the last quarter of a century. The movement, however, has been

exceedingly rapid. This is indicated by the growth of the investment business of such institutions as the Guaranty Trust Company, the Bankers Trust Company, The Equitable Trust Company of New York, and the Harris Trust & Savings Bank of Chicago. Investment activities have not lessened or interfered with the commercial banking operations of the trust companies, and the commercial end of the business has become and still remains the dominant one in most instances.

The great commercial banks were not disinterested observers of the expansion of trust company functions. They naturally were unwilling to leave the investment banking field to their trust company rivals. When not hindered by their charter restrictions, they reached out into the business of originating and dealing in the various kinds of investment securities. They sought, moreover, to have their charters broadened so as to undertake trust functions as well as that of deposit and discount banking. The national government and many of the states were at first reluctant to grant these additional privileges to the commercial banks organized under their respective laws, but the drift toward the department store type of banking could not be swept aside. Today, national banks may act as trustees, and many states of the Union have granted the same right to the commercial banks created under their banking laws.

The first dominant instance of a large national bank expanding into investment banking was furnished by the National City Bank. About 1909, under the presidency of Frank A. Vanderlip, the bank prepared a plan to operate a securities company by organizing a corporation of which it would have entire ownership. The Comptroller of the Currency at the time disapproved this proceeding, but two years later, a new plan, whereby the investment company's shares would be held by the individual stockholders of the bank in the same proportion as their holdings in the National City Bank, passed the gauntlet of official restrictions. The example has

been followed by numerous other national banks. In this way these institutions, created solely as banks of discount and deposit, in the course of their operations promote and direct the flow of investment funds.

Forms of Capital Credit—The Real Estate Loan.—The best known form of capital credit, as already stated, is the real estate mortgage loan, *i.e.*, a loan secured by real estate. This form of investment came into the field before the others, and it is still popular. Under real estate mortgages may be included the farm loan bonds and other mortgage certificates based on land and buildings as security. The participating certificates which bond and mortgage trust companies issue against a number of individual real estate mortgage loans that they have made are likewise to be classed as real estate loans. All these will be described in a later chapter.

The Investment Bond.⁷—The investment bond is the principal form of long-term, or capital credit. This may be a plain certificate acknowledging indebtedness and carrying no lien; or it may have the security of a mortgage, deed of trust, or the pledge of specific property for the purpose of insuring the payment of the obligation. The various classes of bond issues will be taken up in detail in Chapters VII and VIII.

From legal and economic standpoints, there is very little difference between the real estate mortgage loan and the investment bond. Fundamentally they are the same. There are, however, some important practical differences between them. The ordinary real estate mortgage is a loan made on the security of real estate. The right is given the investor or holder of the mortgage to levy on or take title to the mortgaged property to enforce his claim for the interest and the principal of the debt. Formerly, when property was pledged for a loan its legal ownership was transferred to the lender, though the

⁷ Notes and bonds are here considered as identical, and terms are used interchangeably.

borrower still held possession of it. Nowadays, however, the borrower retains the legal ownership as well as the possession of the mortgaged property, so long as he meets the obligations of his mortgage contract.

Shares of Stock.⁸—Another distinction to be made among the various forms of investment is that between stocks and bonds. A share of stock is a certificate of proprietorship in a corporation, while a bond is a certificate of indebtedness of a corporation, representing a claim against it for value received. The owner of a stock certificate is one of the proprietors of the company that has issued it, and he occupies a legal position somewhat similar to that of a partner in a firm. On the other hand, a bondholder, who has simply loaned money, has a creditor's rights and privileges. This is the principal legal distinction. However, because of the many and varying conditions under which both bonds and stocks are issued, it is no longer sharply drawn. Some classes of stock as, for instance, preferred shares give their holders certain rights of creditors, and some bond issues give their owners certain rights of proprietorship—as, for example, the voting privilege.

There are various kinds of stock, each giving the holder certain definite rights of ownership and control. One class may confer on him no benefits other than participation in the profits. Others give the holder preferential claims and privileges. Preferred stock, for example, generally gives holders a preferential right in the distribution of earnings or profits, and frequently in the distribution of the assets in the event of liquidation. On the other hand, in many cases holders of preferred shares have no voice in the affairs of the issuing corporation. Thus, the preferred stockholder may be essentially a creditor of the company, though he may have no right

⁸ It is not the purpose to discuss fully in these pages the various classes of corporation securities. The reader is referred to standard works on corporation finance, particularly, Dewing, *The Financial Policy of Corporations*, Ronald Press Co.

to demand repayment or return of his principal. Perhaps the important distinction between stock and bonds from the investment viewpoints is that as a rule stocks do not furnish the security of income or principal afforded by bonds. A company is generally under no obligation to pay a fixed or a periodical income on its stock. Thus stockholders both preferred and common may be deprived of a return on their shares for a prolonged period. Moreover, all claims for taxes and interest on debts must be met before stockholders receive any portion of the earnings, so that ordinarily income on a stock is not nearly as stable as income on a bond. Neither is there the same security of principal, because the stockholder has no mortgage or pledge of property and no right to the return of the principal of his holdings on a fixed date. He cannot exercise the ordinary rights of a creditor in case the company whose stock he holds has defaulted on its contract under which the stock was issued, whereas the holder of a bond or note is given certain preferences as a creditor in the distribution of the assets in case of bankruptcy or dissolution. Moreover, he can co-operate with other bondholders to take legal proceedings to enforce the contract for the payment of periodical income and a return of the principal when due.

Legally, the capital stock of a corporation represents the fund subscribed by the proprietors, for the purpose of enabling it to conduct its business and to obtain credit. It is the vitalizing element in the corporation, its life-blood. Though the corporation is theoretically liable to shareholders for the money value represented by the stock, the liability cannot be enforced as long as the corporation is a "going concern."

Investment Stocks.—Although it was stated in a previous paragraph that stocks as a rule do not furnish the security of income or principal afforded bonds, there are, as pointed out by Professor Dewing, stocks which have all or many of the investment qualities of bonds, inasmuch as the stock "stands

for the entire capital of the business." The chief examples of this class of securities are the shares of banks and insurance companies.⁹ These corporations, except in rare cases, have no preferred shareholders, no bondholders, no short-term note holders. As in the case of all business corporations, they may have liabilities designated "current," "floating" or "unfunded" indebtedness. A number of mortgage or trust companies, which also operate as banks of deposit and discount, have outstanding obligations secured by individual real estate mortgages, which they have acquired through purchase. In other words, these companies lend money on real estate as security, and issue their own obligations based on the ownership and pledge of the mortgages. At the same time they guarantee the principal and interest. In return for that guaranty, the mortgage companies demand a profit for themselves. This profit is generally obtained by selling their own indebtedness certificates at a lower rate of interest than they receive from the owners of the mortgaged real estate. The operation is very similar to the rediscounting by commercial banks of their commercial paper purchases with the federal reserve banks. But in the case of the bond mortgage companies, the transaction involves a capital on long-term credit operation, whereas with the commercial banks, it is concerned with short term on commodity credit.¹⁰

Legal Character of Corporation Stocks.—The considerations relating to stocks as investments differ but little from those already discussed in preceding chapters with reference to bonds. The principal distinctions, as already pointed out, are founded on the legal character of corporation shares. Shares of stock technically represent participation in ownership and not indebtedness. A shareholder, accordingly, has some of both the privileges and liabilities of proprietorship. These

⁹ See Chapters XXXI and XXXII.

¹⁰ The Federal Farm and Joint Stock Land Banks issue obligations of much the same character as the mortgage bond companies. See Chapter XIII.

privileges and liabilities, whatever they are, may be strictly defined and limited. The terms under which shares of stock are issued establish a contractual relationship between the corporation and its shareholders, enforceable in so far as they may be, by the same legal process as the rights of bondholders and other creditors.

As a shareholder is legally a proprietor and not a creditor, he, unless restricted by the terms of the stock issue, shares in the residual profits and benefits of the company's operations. In others words, he may share in the surplus earnings of the corporation after all the prior claims of creditors and others are met. On the other hand, he, as a rule, cannot enforce his claim to a fixed income from his investment even though, as in the case of preferred stock, he is restricted to a maximum return on his shares. In the absence of specifications strictly defining the terms under which shareholders are to receive a participation in the distribution of profits (*i.e.*, dividends) the courts in most cases permit the directors of corporations to use their discretion in these matters.

Investment Position of Stocks.—The relative investment position of corporation shares in some cases may be largely determined by the priority of claims to dividends or other rights, but these preferences are of little value when not backed up by assets or earning power. Thus, during the early years of the United States Steel Corporation, when its earning capacity was not developed, the company's preferred shares fluctuated widely in value and on the whole lacked the price stability of investment securities. As surplus earnings accumulated, and were converted into assets with increased earning power, these preferred shares began to be purchased for investment rather than speculation. In the meantime, the common stock, which was also placed on a dividend basis, remained a speculative issue because of the uncertainty of surplus earnings available for distribution to holders of these shares.

Should the prosperity of the company continue, it is quite probable that the common stock will have a market value in excess of the preferred stock, even though the former receives no greater rate of dividends than the latter. The fact that common shareholders may receive a higher return whereas the owners of the preferred are already receiving the largest distribution obtainable by them, leads to a willingness on the part of the common stock purchasers to pay the higher price. Thus, the expectation of larger income return more than offsets the greater assumption of risk.

As stated above, the investment position of many corporation stocks is affected adversely by outstanding indebtedness, all of which commonly has priority of claim on assets and earnings.¹¹ A heavy indebtedness relative to earnings or to total capitalization may place the shares in jeopardy, since inability to meet the claims of creditors as they become due may lead to bankruptcy and receivership. In this event, the corporation's affairs cease to be conducted by the shareholders, and all rights, equities and claims attaching to the shares are nullified or held in abeyance. In some lines of business, however, large outstanding indebtedness, when covered by assets readily convertible through sale into cash, or when possessing ascertained earning power, is a financial advantage to shareholders. This is fundamentally true of any business which can obtain funds or credit at a lower cost than the profits that can be made from capital obtained in this way. When a manufacturer can make 15% or even 10% on capital used in his business, he will find it desirable, provided he can profitably employ additional funds, to borrow at 6%. If he has invested in his business \$100,000 on which an annual profit of \$10,000 is obtained, an additional credit of \$100,000 obtained at 6% would give him an annual net return of \$14,000, or 14%

¹¹ There are a few exceptions, such for example, as the preferred stock of the Bliss Company and the debenture "B" stock of the Green Bay and Western Railroad, both issues of which are entitled to dividends in priority to certain classes of obligations.

instead of 10% on his own investment. The vast volume of commercial and industrial borrowing in business is done on this very basis.¹² Borrowing with any other object in view, except under conditions of financial distress, is uneconomical and therefore unsound.

Shares in Voluntary and Trust Associations.—An obsolescent form of investment security, analogous to the common stocks of corporations, are the shares of voluntary associations or "trusts." The chief type of this security up to the present have been the shares of the large express companies.¹³ A few old New England business concerns organized a generation or more ago, also have this form of organization. As stated by Professor Dewing, "Except in the legal obligations taken by their owners, which are analogous to those of partners, the 'association' shares are common stocks in all but name."¹⁴ The so-called "Massachusetts trust," a type of corporate business organization, though formerly common, but now peculiar to the state of Massachusetts, has in addition to negotiable partnership arrangement, a limitation of shareholders' liability similar to that of the ordinary business corporation. Title to the property of the association, instead of being held by a legal person (*i.e.*, the corporation) is held by a group of trustees. Hence the designation of "trust" for this type of organization. The trustees issue negotiable certificates of "equitable interest" in the trust property. The rights and duties of the trustees and the powers of certificate holders are contained in the trust agreement or articles of association.

REFERENCES

CLEVELAND, FREDERICK A. *Funds and their Uses*. New York, D. Appleton & Co., 1903, 304p.

¹² For an excellent presentation of this subject, see Walter Bagshot, *Lombard Street*, and Hastings Lyon, *Corporation Finance*, Chapter II.

¹³ Several of these express companies are in process of liquidation.

¹⁴ See Dewing, *The Financial Policy of Corporations*, Vol. I, pages 8-11.

- DEWING, ARTHUR STONE. *The Financial Policy of Corporations*. New York, Ronald Press Co., 1920 (Vol. I, 154p.).
- GERSTENBERG, CHARLES W. *Financial Organization and Business Management*. New York, Prentice-Hall, Inc., 1924, 723p.
- HAGERTY, JAMES E. *Mercantile Credit*, Chap. II. New York, Henry Holt & Co., 1913, 382p.
- SMITH, EDGAR LAWRENCE. *Common Stocks as Investments*. New York, Macmillan Co., 1925.
- WITHERS, HARTLEY. *Stocks and Shares*. New York, E. P. Dutton & Co., 1910, 372p.

CHAPTER VII

CLASSIFICATION OF INVESTMENT BONDS

LEGAL CHARACTER OF DEBTOR AND LIENS

The Fundamental Characteristics of Bonds.—As pointed out on page 54, the principal kinds of long-term obligations forming the basis of modern investment are real estate mortgages and bonds. In the discussion in the previous chapter, it was shown that real estate mortgages are frequently collateral as security for an issue of bonds, and that this form of mortgage financing is becoming increasingly common. The distinction of the real estate mortgage and the bond certificate is in reality based more on legal than on financial grounds. Both are evidences of claims for value, but the holder of the mortgage possesses a conditional title to property, whereas the bondholder has merely a document evidencing an obligation. For the enforcement of his claims and rights, the bondholder usually must act in concert with others having like claims and through a representative called the trustee. The trustee is in most instances a trust company or bank, though individuals may act in this capacity.¹

Bases of Classification.—Investment bonds are variously classified. An attempt to cover all classifications would be an almost endless task and is not undertaken in the present chapter. Each classification depends upon some special feature or characteristic designated in the bond. The following features have been selected as the most important for the purpose of this chapter.²

¹ Government and municipal bonds rarely are issued through the instrumentality of a trustee, to represent and protect the interests of the bondholders. See Chap. XIV.

² Discussions of bond classifications are ably presented by Lawrence Chamberlain in *Principles of Bond Investment*, pages 72-114, and by Arthur S. Dewing in *Financial Policy of Corporations*, Vol. I, pages 17-112.

1. Character of the debtor concern
2. Security of the bond
3. Priority of the mortgage lien
4. Provision for repayment
5. Interest payment
6. Special privileges to the bondholder

Character of Debtor Concern.—The commonest classification used by banks and investment houses is that based upon the character or business of the debtor or maker of the bonds. In general there are only two main divisions in this classification: bonds issued by government or civil organizations, and bonds issued by business organizations. Some corporations do not fall in either class. Such are charitable organizations, clubs, etc., which at times issue interest-bearing securities. They are, however, relatively few in number and their obligations are rarely negotiated outside of the membership of the organization, unless their value is based on income-producing property. Accordingly, the obligations of private institutions are generally excluded from investment bond classifications.

Civil Loans.—The first division in the above classification, the civil loans, comprises all governmental issues, *i.e.*, the certificates of indebtedness of a nation, or a state, county, or other so-called political subdivision, which may be merely a prescribed geographical area, such as a drainage district, a school district, or any other political association which may legally be authorized to levy taxes and issue bonds. The makers of these obligations, when not national sovereign authorities, are in most cases known as public corporations or bodies politic. They are created as agencies of a sovereign or quasi-sovereign authority (such a state of the United States) for a public or administrative purpose. Accordingly, it is not the function of a public corporation to conduct its affairs for purposes of profit or for pecuniary gain.

Bonds Issued by Business Organizations.—Among the bonds of business corporations are those issued by railways, steamship companies, public service companies, manufacturing concerns, and all enterprises that are conducted for profit. Railroads and public utilities are known as “public service corporations.” The distinctive characteristic of these enterprises is that they operate under a legal grant of authority or privilege to use public property in the exercise of some public function or to furnish a public service. This grant or privilege to use public property is known as a “franchise.” Almost all organizations which must operate under a franchise, whether the grant is direct or implied, are included among the so-called public service corporations. The importance of a public service company’s franchise in determining the investment merits of its securities is discussed in Chapter XXVI.

Industrials.—The bulk of the securities of ordinary business organizations belong to the class commonly known as “industrials.” They are issued by manufacturing, distributing, mercantile, real estate and financial enterprises. The securities of mining companies are also generally included in this class. In fact, the securities of any concern organized for purposes of profit, and not required to operate under a franchise as the term was defined in the previous paragraph may from an investment viewpoint be called “industrials.” Financial and fiduciary corporations such as banks, trust, title and insurance companies might be classed separately from other “industrials” since they, like public service corporations, conduct a business that is subject to special public regulations. There are other special groups of business corporations that also may be kept separate from the general class of industrials. Steamship companies, for example, are not as a rule classified as public service corporations, though some operate under a franchise and are also under restrictions and regulations as to rates and practices

similar to those under which street car companies or railroads operate.

Security of the Bond.—For the purpose of studying investment bonds, other classifications are necessary besides the one based on the character of the debtor corporation. A classification based on the nature of the obligation is important. Thus, a bond may constitute merely an acknowledgment of indebtedness to the holder. It then represents but a promise of the debtor to pay the periodical interest on certain dates and the principal when due. It is known as a "plain" bond, or "debenture," and does not differ essentially from an ordinary promissory note. In England, such obligations known as debentures are the common form of investment bonds, relatively few mortgage bond issues having been put out by British corporations.

American investors generally demand some hypothecation, pledge, lien, or priority of payment in the case of an investment bond. This additional security usually consists of a prior claim or some conditional title to specific property granted to the bondholders collectively. Such priorities or rights can be enforced against the debtor if the terms of the contract under which the bonds are issued are not carried out. From the viewpoint, therefore, of special security to the bondholder, there are but two general classes of bonds: (1) plain bonds or debentures, and (2) secured bonds. The lien or hypothecation of the latter may be a mortgage on real estate or on personal property, or on both. The legal distinction between realty and personalty will be discussed in Chapter XII.

Whether a bond is specifically secured by property or constitutes merely evidence of a promise to pay, it is, as pointed out by Professor Dewing,³ a right to participate in a legal contract which the corporation enters into with a trustee. Bonds representative of civil loans are an exception inasmuch as gov-

³ *Financial Policy of Corporations*, Vol. I, page 19.

ernment obligations are generally issued without the intermediary of a trustee or third party to the loan contract. Civil loans, as a rule, constitute contracts directly between the holders of the obligations and the debtor government. They may be, however, specifically secured by property or revenues, and although fiscal agents may be appointed to carry out the provisions of the debt contract and to protect the rights of the bondholders, such agencies have not as a rule the functions and liabilities of trustees. It is for this reason that in cases of default by governments and municipalities on their obligations, the holders of the defaulted securities may enter suit individually and directly for performance of the terms of the contract.

When a corporation issues mortgage bonds, it conveys and assigns unto the trustee for the benefit of the bondholders, all of the property, franchises and other possessions upon which the bonds are to be a mortgage. This conveyance is essentially the same as a real estate mortgage. Every corporate mortgage should contain a description of the property to be mortgaged so that it may be readily identified. There are also the usual provisions that the property is to be kept insured and in repair, and that none of the property is to be sold or sequestered, unless the proceeds go toward the satisfaction of the mortgage or that property of equal or greater value in lieu thereof, is brought under the lien. It is generally specified that if default is made in the performance of any agreement contained in the indenture or mortgage deed, such as the failure to pay interest on the outstanding bonds, the whole amount of the principal then becomes due and payable and that the trustee, as representative of the bondholders may take legal proceedings to enter upon the property or dispose of same under foreclosure proceedings.

The Trust Deed or Indenture.—The written contract, known as the indenture, or "deed of trust" drawn up between the debtor and a trustee representing the bondholders, is a most

important document to the bondholders since it definitely sets forth their rights and privileges. The document is just as essential to unsecured or debenture bondholders as to the holders of mortgage obligations. The bondholders individually, however, are not made parties to the contract, as the trustee acts in their behalf.

In every deed of trust, it is essential that the mortgaged property be fully described so that it can be readily identified and segregated from the company's other property. This is a feature required in all mortgage loan contracts. The indenture should also contain the name and a description of the bonds to be issued, their maturity dates, the interest rate or rates, and such other provisions as will in the future avoid uncertainties or legal perplexities. In addition, the indenture should describe the provisions for enforcing the contract in case the interest or the principal is not paid, or some other provision contained in the indenture is not carried out.

Controlling Voice.—An important provision in bond indebtedness is the one specifying the proportion of the outstanding bonds that must be held to obtain the controlling voice when steps are taken to enforce the lien or to alter the provisions of the loan. For example, the indenture of the Seaboard Air Line Refunding Mortgage states that the holders of a majority of the bonds shall determine the procedure to be taken. If this majority, by written notice to the trustee, decides that the period of the bonds shall be extended or that the interest payments shall be waived, the minority holders generally must abide by the decision. This provision is responsible for the so-called "protective committees" which are organized with the object of getting deposits of bonds so that enough is obtained to constitute a controlling power for bringing about definite and unified action for the protection of all the holders.

Rights and Duties of Trustee.—In this connection, it is well to point out again that though the bondholder is individ-

usually a creditor of the corporation, he is limited in his rights as a creditor both by the provisions of the indenture and by the fact that there are other holders who have the same rights and with whom he should co-operate. In other words, he has to exercise his rights through a trustee, usually a trust company, which represents all the holders. The trustee, as a rule, will not act unless it is assured of the bondholders' support. A certain proportion of the bondholders is theoretically required to give written notice to the trustee demanding that action be taken. The trustee will not act unless funds are available to cover expenses. Generally the protective committee mentioned above provides the funds, charging the expense pro rata to the bondholders.

The trustee usually limits its liabilities under the terms of the indenture; that is, it agrees to act as such only as provided in the indenture and to assume responsibility only so far as it is legally required. All these matters make it very important for one who wishes to study an issue of bonds to become thoroughly familiar with rights of bondholders. In general, it may be said that the deed of trust or mortgage outlines the rights of the bondholders, the rights and duties of the debtor corporation, and the rights and duties of the trustee.

Protective Features of Debenture Bonds.—Debenture or "plain bonds" are frequently issued with a provision in the indenture that prohibits the debtor corporation from mortgaging its property or, if there is no such prohibition against a mortgage, it is usually required that the debentures are to be a prior lien or to be equally secured with future issues of mortgage bonds. In this way, a number of bonds which are still termed debentures are now secured by mortgage. Among these are the debentures of the New York, New Haven & Hartford, the Boston & Maine, and the New York Central railroads. A restriction against future mortgages in favor of debenture bondholders does not as a rule prevent the renewal of existing mortgages or the assumption of mortgages already existing

on subsequently acquired property. Debenture bonds, even when issued with restrictions against mortgaging of the debtor's property, do not generally have the high investment rating of mortgage bonds. Among other things, this is due to the possibility of the debtor creating an indebtedness, either funded or unfunded, which ranks equally with the obligations of the debenture bonds. In the event of default in payment of interest or principal, therefore, ordinary creditors generally have the same rights in the distribution of the debtor's assets as the debenture bondholders, since the latter, having no lien on specific property, have no rights of foreclosure.

In order to protect debenture bondholders against the effects of an excessive current indebtedness, it is frequently provided in the indentures under which the bonds are issued, that the debtor corporation will maintain a minimum of current assets over its current liabilities. In other words, the debtor agrees to maintain in its possession assets which can be readily converted into cash at a value equal to or in excess (as required by the indenture) to its immediate or shortly maturing indebtedness. In some instances, it is required that the current assets at all times exceed both the current indebtedness together with the amount of the debentures outstanding.

Collateral Trust Bonds.—An important class of bonds, known as “collateral trust” bonds, has come into great popularity in recent years. These bonds are secured by a deposit of personalty in the form of securities, consisting of either obligations or stocks, or both. A collateral trust bond constitutes, therefore, a loan similar to that made by a bank which has received securities from the borrower as collateral. The important difference between collateral trust and mortgage bonds is this: In the case of the mortgage bond the hypothecated property is left in the possession of the mortgagor, or debtor; in the case of the collateral trust bond, the pledged property is given over to the possession of a third or disin-

interested party, *vis.*, the representative of the bondholders, commonly known as the "trustee." The income and other rights, however, attaching to securities pledged under a collateral trust bond usually remain with the debtor. The investment value of collateral trust bonds depends, first, upon the character and intrinsic value of the pledged securities, and, second, upon the general credit and financial standing of the company issuing the securities. As a rule the terms under which collateral trust bonds are issued require a guarantee or undertaking on the part of the debtor concern to pay both interest and principal regardless of whether or not the pledged securities can be sold or otherwise disposed of at a price sufficient to cover the principal amount of the bond issue. Every precaution, however, is usually taken to maintain the intrinsic and market value of the collateral. Many mortgage bonds are, in addition, secured by deposit of collateral and are, therefore, both mortgage and collateral trust bonds.

Collateral trust bonds are commonly used by all classes of corporations though they are characteristic obligations of "holding companies."⁴ As pointed out by Professor Dewing,⁵ the first and most reasonable use of this kind of bond has been to realize money from a multitude of small bond issues, no one of which is sufficiently large to command a wide market. Another reason for recourse to collateral trust bonds by many corporations has been the so-called "after-acquired property clause" contained in the mortgage indentures. This clause, as stated on page 78, brings under an existing mortgage physical property acquired by the corporation after the indenture or mortgage contract has been signed. Accordingly in order to avoid having later acquired assets from becoming mortgaged in this way, the debtor places the title of such assets in the name of another corporation, in which it acquires stock ownership. As small independent corporations find dif-

⁴ For definition of holding company see page 26.

⁵ *Financial Policy of Corporations*, Vol. I, page 58.

difficulty in marketing their securities, the "holding" or parent corporation borrows for it by taking its obligations and in turn pledging them as collateral for a loan of its own.

Guaranteed Bonds.—Another class of bonds that has become quite common is known as "guaranteed" bonds. They are similar to indorsed notes, having the guarantee of a third party. The guarantee may apply to the payment of interest or of principal, or of both. The Pennsylvania and the New York Central, as well as many other railroads possessing good credit, have guaranteed respectively the bonds of the various corporations controlled by each, or in which they are interested financially or otherwise. Such endorsements have enhanced the market value and intrinsic merits of guaranteed bonds. Somewhat similar to guaranteed bonds are the so-called "assumed" bonds, representing issues the liability for the interest and principal of which has been assumed by a concern other than the original obligor.

Guaranteed bonds are of two kinds: those which are guaranteed by endorsement on the bond certificate, and those which are guaranteed by contract between the guarantor and the obligor or otherwise. In the second type of guarantee, the bondholder is not a direct party to the contract of guaranty, and has no recoverable rights against the guarantor. It is for this reason that the guarantee by endorsement on the bonds is from an investment standpoint more desirable than a guarantee under a contract. Of course, the credit standing of the guarantors is always an important matter for consideration, and a guarantee by a rich corporation under an agreement with the direct obligor may have a greater influence in determining investment value than the actual endorsement on the bond certificate by a financially weak corporation. Thus, the guaranty under a lease of the bonds of the Baltimore, Philadelphia & Washington Railroad bonds by the Pennsylvania Railroad is worth more than the direct endorsement

of the New York, New Haven & Hartford Railroad Company on the bonds of the New York, Westchester & Boston Railway. There are instances, however, where a leased railroad property or a subsidiary concern of an industrial company is of such strategic importance to a financially weak guarantor that the guarantee under a rental agreement adds greatly to the investment merits of the guaranteed obligations. The guarantee under lease agreement, for example, of the bonds of the Chicago, Terre Haute & Southeastern Railway by the Chicago, Milwaukee & St. Paul Railroad Company would have little investment value were it not for the fact that the former railroad furnishes the St. Paul system with lines reaching into the Indiana and Illinois coal fields, whence comes its coal supply.

Priority of the Mortgage Lien.—A classification of bonds under this heading is limited to obligations that are a direct lien on property or securities. There are many kinds of liens and mortgages represented by investment bonds, each of which has a different name. The investor or student, however, should not be deceived as to the nature of the lien by the name of the bond. A corporation, for example, can issue a bond under the name of a "first and refunding mortgage," which may be a first mortgage on but a very small part of the property and an inferior mortgage or lien on the remainder. A corporation can give a bond any name it desires, as there is no legal restriction on the use of names. The nature of the lien, accordingly, is not necessarily indicated by the caption on the bond.

Technically, a mortgage bond is an obligation that is secured by the hypothecation of specific property or franchises, or both, which, in case of non-payment of principal or interest or default in any other agreement made with the bondholders or their representative gives the bondholders a claim prior to that of the other creditors. Thus, in the event of default

or of bankruptcy, a first mortgage bondholder is presumed to have a first and prior claim on the equity in the property pledged under the lien of the bond. His right in this respect is superior to the right of the creditors of the corporation holding inferior liens, such as second, third, or fourth mortgage bonds. A first mortgage may be a first lien on all the property of the debtor corporation or only on a specific part; but in so far as the holders of the first mortgage bonds have a superior claim, they can collectively take legal action to enforce that prior claim in case of default. The Erie Railroad has as many as seven mortgages on certain parts of its main railroad line. The respective rights of priority of the holders of each class of these mortgage bonds are defined in the contract under which the separate securities have been issued.

“Open-End” Mortgage.—The mortgage securing a bond issue may be limited to a maximum amount, termed the “authorized” amount, or it may be “open,” *i.e.*, without any definitely set limit. As a rule, a definite amount of dollars is stated as the maximum of bonds that can be issued under the particular lien. Some issues, however, fix no definite amount, but limit the total to so much per mile in the case of a railroad, or to a certain percentage of the sums spent to improve and extend property and equipment,⁶ or to an amount bearing a stated ratio to the stock outstanding or some other issues of bonds to be redeemed or refunded. Such mortgages are frequently called “open-end” mortgages.

Some limitation on the amount of obligations to be issued under a mortgage lien is essential for the protection of the equity of holders of this class of obligations. As the mortgage bondholder is relatively in the same position as the real estate mortgagee, the principal of his investment is fully protected only when he has an assurance that in the event of a

⁶ These limitations are sometimes termed “the escrow provisions.”

default, the mortgaged property can be sold for a sum as great or greater than the amount of the mortgage. The attainment of this object in part at least can be accomplished through a limitation of the issue of mortgage bonds to an amount well under the cost or the appraised value of the property covered by the mortgage. Although appraisal or physical valuation is not as important in the extension of mortgage credit to "going" business concerns (such as railroads and manufacturers) as it is in real estate loans, it operates as a check to excessive indebtedness and thus is an element in determining the intrinsic investment merits of mortgage obligations.⁷

"After-Acquired Property" Clauses.—In addition to limiting the amount of mortgage bonds for the protection of the bondholders, many corporations, as stated on page 74, have agreed in their deeds of trust to extend the provisions of the lien to property acquired subsequently to the date of mortgage. This "after-acquired property clause" tends to enhance both the speculative as well as the investment value of the mortgage security, particularly if the debtor concern is likely to increase its capital assets in the course of its business operations. However, because the "after-acquired property clause" has in many instances seriously handicapped the borrowing capacity of corporations when in need of additional mortgage facilities, the provision is now rarely inserted in mortgage deeds, and where it exists, the subterfuge, mentioned on page 73, of incorporating separately new property acquisitions, and mortgaging its assets under another deed of trust, is resorted to. Under the more popular "open-end" mortgage additional first mortgage bonds can be readily issued within the specified margin.⁸

⁷ The subject of physical valuation will be discussed in succeeding chapters dealing with railroad and public utility securities.

⁸ When new property is acquired already subject to liens, such liens in respect to this property, cannot be legally disturbed by the "after-acquired property clause."

Consolidated, General Mortgage and Refunding Bonds.—

There is a large class of mortgage bonds known as "consolidated mortgage" bonds, which came into being when separate and individual mortgages on the property were consolidated and new bonds were issued to take the place of the old. This class of mortgage bonds is common among railroads and public utilities. Another common type of mortgage is known as "general" mortgage, or "general and refunding" mortgage, sometimes called the "blanket mortgage." The liens of these frequently cover all fixed property of the corporation, including the parts already subject to other prior liens, but, of course, are made subject to the rights of such prior liens.

The refunding mortgage, as its name implies, is a mortgage issued for the purpose of refunding other indebtedness. Each issue of mortgage bonds, as a rule, has a maturity date signifying the time when the principal of the debt is due. A corporation having several bond issues with different maturities is under the unpleasant necessity of frequent and perhaps costly refinancing. In order to avoid this piecemeal refunding, a single large issue of general and refunding mortgage bonds is created. By means of a general refunding mortgage, bonds which originally have an inferior lien on certain property may in time become a prior or superior lien on such property through the maturity and cancellation of prior mortgages. Accordingly, a general or refunding issue may at one and the same time represent a first lien on one part and a second or other inferior lien on another part of the corporation's property.

The comparative value of various bond issues of the same corporation depends greatly upon the character of the lien, and it is not at all surprising that different issues of mortgage bonds of the same company having the same rates of interest and similar maturities will sell at large disparities in price and income yield. The Consolidated Mortgage 4% Bonds of the Pennsylvania Railroad Company, for example,

sell at a higher price relative to the income or investment yield received than the same company's General Mortgage Bonds, because the lien of the first issue is prior and superior to that of the latter. This means that the holder of the Pennsylvania's Consolidated Mortgage Bonds, in the event of default, bankruptcy, or liquidation, have a claim on the assets, franchises, and earnings of the company superior to that of the holder of the company's General Mortgage Bonds.

Divisional Mortgage Bonds.—The term “divisional bonds” is applied chiefly to issues of railroad companies which are secured by a lien (usually a first mortgage) on a part of the company's property. Such property generally consists of branch lines or divisions originally separately incorporated or which are not subject to the “after-acquired property clauses” of the first or main line mortgages. A number of large public utilities and industrial companies, such as the Bethlehem Steel Corporation and the Public Service Corporation of New Jersey also have “divisional mortgages” on specified plants or other controlled properties. When the divisional mortgages are followed in lien by general or consolidated mortgages, they are frequently termed “underlying mortgages.” The relative investment merits of underlying or divisional mortgages depend on the value, the strategic importance and the earning capacity of the property covered by the separate or divisional liens.

REFERENCES

- CHAMBERLAIN, LAWRENCE. *The Principles of Investment*. New York, Henry Holt & Co., 1911. (Chs. VIII-XI inclusive.)
- DEWING, ARTHUR. *Financial Policy of Corporations*. New York, Ronald Press Co., 1920 (Vol. I.), 154p.

CHAPTER VIII

CLASSIFICATION OF INVESTMENT BONDS

REPAYMENT, INTEREST AND SPECIAL PRIVILEGE PROVISIONS

Maturity Provisions.—A common classification of investment bonds relates particularly to the provision for the repayment of the principal. This classification is not so common or so important as those discussed in the previous chapter. It has been pointed out that some foreign government bonds have no maturity. In this country, there are a few government bond issues which extend over a long period before the principal can be demanded, though several railroads have bond issues extending over a period of 100 years or more. Although these are exceptional cases, obligations having long maturities are gaining in favor with railroad and public utility companies. Governments and municipalities, on the other hand, are tending toward the creation of shorter term obligations. By putting out long-term bonds the inconvenience and expense of refunding operations is avoided. Perpetual bonds, though a common form of foreign government indebtedness are not generally issued in the United States. One important public utility company, however (the Public Service Corporation of New Jersey), has outstanding a large issue of "perpetual certificates" secured by collateral consisting of stocks of subsidiary companies. The Canadian Pacific Railway of Canada also has outstanding an issue of 4% irredeemable debenture stock which, to all intents and purposes, is an obligation and ranks in priority to any future bond issues of the company. Among American railroads, obligations issued to mature more than one hundred years after date of issue are rare. Of existing railroad bonds, the West Shore Railroad

First Mortgage 4's issued to run for 475 years and due in 2361 have the longest maturity. The Chicago, Milwaukee & St. Paul Railroad, the Chicago & North Western, the Great Northern, and the Louisville & Nashville have within recent years sold new bond issues with maturities extending one hundred years from date of issue. Several public utilities are following the same practice, though a fifty-year maturity is considered a rather long maturity for obligations of such companies. Industrial corporations and municipalities generally are required to limit their issues to shorter maturities. The Bethlehem Steel Corporation has a small subsidiary bond issue that does not become due until 1998. Among public utility company bonds of long maturities are the \$10,000,000 New York & Westchester Lighting First 4's, due 2004, and the Kings County Electric Light & Power 6's, due 1997.

If a holder of a bond wants to convert the principal into cash at some time, he can ordinarily do it only in two ways: by collecting it at maturity, or by disposing of the obligation through sale in the market. There are, however, many instances, as noted in later pages, in which corporations have "called in," *i.e.*, extinguished, a long-term debt in advance of maturity.

Sinking Fund Bonds.—Both civil organizations and corporations issue what are termed "sinking fund" bonds, which are sold under the agreement that the debtor will, in addition to making the periodical interest payments, set aside at regular periods a certain amount toward the payment of principal of the bonds at maturity. Such sinking fund payments are as obligatory as the payment of interest, and if the debtor corporation fails to make them, the bondholders may ordinarily exercise the same legal rights as when the debtor fails to pay the interest.

Sinking fund bonds are an indispensable form of obligation in the case of coal and other mining concerns whose capi-

tal assets exhaust themselves in the regular course of operations. With companies the value of whose assets remains intact, a sinking fund is not so important. For example, railroads do not generally issue sinking fund bonds, since railroad property is practically as permanent as the ground on which it is constructed. But mining corporations, ship companies, steel manufacturers and other concerns having property that tends to depreciate in value with use are required to issue sinking fund bonds in order to place their obligations on a sound investment basis.

Mining companies extract their original investment from the ground in the course of operations. Hence they usually agree when their bonds are issued to set aside as a redemption fund an amount proportioned to the quantity of ore or coal extracted. Shipping companies, whose assets consist mainly of ships each of which constitutes a large investment that is likely to become useless and to demand replacement "in bulk," are generally required to maintain such redemption funds as reserves to offset losses of value, as otherwise the security of the bonds based on their assets would become impaired. Without sinking fund or other redemption provisions such bonds would decline in market price, unless the general credit of the debtor corporation was of sufficiently high standing to assure bondholders of the payment of the principal when due. The same is true of steel manufacturing and other industrial corporations with plants that tend to deteriorate or become valueless as profit earning property.

Sinking funds may be provided chiefly in two ways. One is to set aside a specific sum at fixed intervals to be invested so that the periodical payments with interest accruals may accumulate, to retire the bonded indebtedness against which the sinking fund is provided. This is known as the "cumulative sinking fund" and is the common method employed by municipalities in meeting their funded obligations. When

the amount set aside periodically for sinking fund is determined with a view to having the payments accumulate at compound interest during the life of the bonds so that the resultant sum is just sufficient to repay the maturing obligations, it is said to be operated on an "actuarial" basis. However, relatively few sinking funds for meeting bond maturities are maintained on this basis. The more general practice of municipalities and corporations is to apply surplus funds or special revenues as a sinking fund provision. This has been the system followed by the City of New York for many years. The outcome has been that the New York City sinking funds are many times in excess of the amounts required, so that their accumulation by various subterfuges is diverted in part to other uses.

The second and better method of providing sinking funds for bond maturities is the setting aside periodically definite sums to be applied either to the purchase of outstanding obligations in the open market or by redemption "calls," *i.e.*, drawings. If the bonds are to be purchased in the open market, an upward or maximum limit is generally placed on the price that can be paid for their acquisition. When bonds cannot be obtained at this maximum price, it may be provided that drawings or calls "by lot" can be made at the stated maximum price. There are bonds issued, however, which are not subject to call for sinking fund purposes, and in this event provision may be made for the investment of the sinking fund in other securities or reversion of the amounts to the debtor concern. Several important bond issues are outstanding which are "subject to call" for sinking fund purposes periodically at a fixed price. Among these are the United States Steel Sinking Fund 5% Bonds and the Belgium Government 7½% Bonds. Bond trustees are usually custodians of sinking funds applying to the issues for which they are trustees, and attend to the sinking fund operations.

Serial Bonds.—"Serial" bonds are issues which are retired in instalments at definite periods. Accordingly, different portions of the same issue have different maturity dates, and the total is retired in instalments. The purpose of serial issues is very similar to that of the sinking fund bonds. Instead of creating and maintaining a sinking fund reserve to pay off its obligations, a corporation or municipality agrees to redeem its bonds in serial order, a certain portion coming due and being payable each year until the whole amount is retired. Each certificate of such bond issue has its definite maturity date.

Market conditions frequently determine whether it is better to put out sinking fund or serial bonds. If the public desires long-term bonds, corporations, cities, and states will find it easier to dispose of sinking fund bonds. On the other hand, if the money market is in such a condition that most investors desire short-term maturities, borrowers will find a better market for serial bonds. During the last decade, because of the abuse and misuse of sinking funds, the sale of serial bonds has become the common method of municipal financing. The method, however, is not so well adapted to corporation obligations, though it is the usual means for the repayment of the important class of railroad securities known as equipment trust certificates. The Standard Oil Corporation of New York, in 1921 put out a large issue of 7% serial notes due in six months' periods in the period 1925-1931 inclusive, and about the same time other large corporations also resorted to this method of repaying funded debts. Investment bankers find the marketing of serial securities more complicated and difficult than sinking fund issues, due to the unequal demand for bonds of various maturities. Earlier maturities may be in great demand by investors, while the later maturities will be neglected, or *vice versa*. Sometimes, the early and the late maturities are in demand, while the others are neglected by investors. Occasionally, serial bonds are offered

by bankers at a uniform price for all maturities, but with the condition that specified amounts of each maturity be purchased. A condition of this kind limits marketability since many investors dislike their holdings to mature in serial order, particularly when the maturities are in small amounts.¹

Callable Bonds.—It is a common practice for corporations and governments, when issuing long-term obligations to reserve to themselves the right or privilege if they choose to do so, to “call in” or redeem the obligations in advance of maturity. By this means, they may be enabled to cancel the indebtedness altogether or to refund the obligations under more advantageous terms to themselves. The right to redeem may be at any time after the bonds are outstanding, or it may be deferred until a specified time has elapsed. When this privilege is exercised, the bonds are frequently paid off at a premium specified at the time the bonds are issued. Thus, the corporation in return for the right to pay off the bonds before maturity, must compensate the holders by an extra payment. Callable bond issues may be redeemable in cash as a whole or in part. When the company has the right to call in a part of a bond issue, the selection is usually made by drawings, *i.e.*, by lot, and payment is made at a fixed price known as the “redemption price.” The United States Steel Corporation Sinking Fund Bonds are redeemable in this way at a premium of 10%, but in this case the redemption is obligatory and not optional with the debtor. A holder of these bonds has to surrender them whenever they are selected for redemption. He, however, always has the privilege of buying the same issue again in the open market. Bonds redeemable by drawings very rarely sell in the market at a price above the redemption price.

¹ There is also some difficulty in listing serial bonds on the New York Stock Exchange, owing to the requirement that separate application be made for the listing and quotation of each maturity. Trading in serial bonds is rendered more difficult by reason of the necessity of quoting different prices and income yield for each separate maturity. The subject is more fully discussed in the chapters on municipal bonds.

When the redemption privilege, however, is deferred for some time after issue, it is quite possible for the bonds to sell in the market before the date when the option of redemption may be exercised, at a price considerably above the redemption price. Thus, the Swiss Government 8% Bonds, redeemable on or after July 1, 1925, at 105, sold, beginning some time in 1922, above this price, and continued at a premium above the "callable" price for three years thereafter. The same market situation developed in connection with several other foreign and domestic bonds which were issued at high interest rates during the years immediately following the world war. As the payment of a considerable premium for the privilege of redemption when a bond is approaching maturity would make refunding in advance of maturity less attractive to the debtor companies, it has now become the practice at time of issue, to provide for a reduction of the premium after elapse of specified intervals. Thus, a bond which can be redeemed at 110 five years after issue, may be made subject to redemption at 107½ after a further lapse of five years, and at 105 five years thereafter. This amortization of the premium requires the careful attention of investors in order to avoid possible losses of principal.

Bonds Classified in Accordance with Interest Payment.—

Another basis of classification of investment bonds is the nature of the interest payments. Most investment bonds carry a fixed interest rate, ordinarily payable semi-annually and are therefore termed "fixed interest" obligations. If the interest is not paid as agreed, there occurs what is termed a "default." If the default continues after a specified period of grace, the principal is declared due² and the bondholders, through the agency of the trustee, may sue to foreclose on the property. These fixed interest obligations constitute the bulk of investment bonds.

² This does not apply to municipal bonds, as the courts have held that default of interest on these obligations does not make the interest payable.

Income Bonds.—There are, however, issues known as “income” bonds wherein the debtor does not agree to pay a definite rate of interest to the holders, but at a rate or rates contingent on certain results, such as the amount of net revenue or the surplus earnings available for interest. Some income bonds are issued under provisions very similar to those relating to preferred stocks. If the full interest is not paid on one interest date it is deferred but the unpaid amount is in the nature of a liability of the corporation, to be paid before any dividends or profits can be distributed to stockholders. Such bonds are known as “cumulative” income bonds. There are also income bonds that are non-cumulative. If a holder of these bonds fails to receive interest during any period when it is not paid, he loses the right or claim to the payment entirely.

Income bonds are not very popular with investors. They are generally issued in the readjustment of the finances of a business enterprise or when a corporation is reorganized after bankruptcy. On occasions of this kind the holders of defaulted bonds of the bankrupt concern may be required to accept an income bond in the newly reorganized corporation in lieu of the old fixed interest bonds which are canceled. Thus, the Third Avenue Railway of New York City issued income bonds in 1911 under such a plan for the readjustment of the finances of the company. The New York Railways, the Hudson & Manhattan Railroad, the Seaboard Air Line, the St. Louis-San Francisco Railroad, and the International Great Northern, also have similar income and adjustment bond issues outstanding. The Atchison, Topeka & Santa Fe Railroad still has outstanding “adjustment income bonds” issued in 1895 on which the interest has been regularly paid since 1897. These bonds though still termed adjustment bonds, have been largely converted by the company into fixed interest obligations because of the high credit standing of the company.

Income bonds may be issued under the condition that the

debtor concern must distribute to the bondholders the portion of its earnings that is available for such distribution up to the maximum rate fixed in the issue. This provision is attached to the St. Louis-San Francisco Railways' Adjustment 6% Bonds and the Seaboard Air Line Railway Company's adjustment 5's. On the latter issue the cumulative interest at 5% annually is payable as earned in installments of $1\frac{1}{4}\%$ or multiples thereof and no dividends are to be paid on the company's stock until all arrears in the interest on the bonds is paid in full. There are other issues that leave the decision of this distribution to the directors of the debtor corporation. In the case of the International Great Northern Income 6% Bonds, at least 50% of earnings available for the income interest is required to be paid unless such portion exceeds the maximum rate. Otherwise the amount paid is optional with the company. In any event, it is generally provided that no dividends are to be paid on capital stock unless full payment on the income bonds for the period has been made.³ In this respect income bonds resemble preferred stock. Income bonds, whether cumulative or non-cumulative, may be mortgage, collateral trust, or merely plain bonds. The reader is again reminded that the bond classifications adopted here are not mutually exclusive. Each is based on a separate viewpoint and relates to a particular feature of investment bonds.

As pointed out by Professor Dewing,⁴ "the use of income bonds is objectionable because the uncertainty of interest payments is very likely to cause confusion. Controversies over the rights of the various parties concerned have come constantly to the courts." The long litigation in the case of the Central of Georgia income bonds is but one of many illustrations of controversies over the question of the correct computation of the amount claimed as earnings available for in-

³ There is a notable exception in the case of the Green Bay & Western Railroad Class B Income 5% Bonds, on which interest is payable only after common stock has received dividends at the rate of 5% annually.

⁴ *Financial Policy of Corporations*, Vol. I, page 84.

come bond interest.⁵ The situation with reference to railroads which in recent years have issued income bonds has been considerably simplified because of the uniform railroad accounting enforced by the Interstate Commerce Commission. Deeds of trust under which the bonds are issued now refer the definition of the net income available for interest payments to the rules and regulations of the Interstate Commerce Commission in force at the time the earnings accrue, and in this way, a judicial arbitration of the matter and expensive litigation is avoided. Public utilities issuing income bonds have in some states similar resorts to the accounting interpretation of the state supervising and regulating commissions.

Classification According to Special Privileges to the Bondholder.—The privileges or claims granted by debtor concerns to their bondholders either directly or indirectly are various and in many instances quite peculiar. An important privilege nowadays is the exemption of taxation of the income received from the bond. Because of it, the holder of the bonds is assured of a regular fixed income, which, as was pointed out in Chapter IV, is one of the two important factors that enter into all sound investments.⁶

Convertible Bonds.—Another privilege attached to certain bonds is the right of the holder under certain conditions to exchange them for other bonds or for the stock of the debtor company. These are known as "convertible bonds." The convertible feature is a part of the debt contract, but the exchange is usually made optional with the bondholder.⁷ The privilege,

⁵ The history of this controversy is given in detail in an article by Professor Dewing in Vol. XV of *Quarterly Journal of Economics*, page 369.

⁶ Because of high income taxes in recent years, most corporations have ceased to issue bonds under an agreement to refund in whole or in part the taxes that the holder may be compelled to pay on the income accruing from the bonds. In some instances, however, corporations agree not to charge bondholders the whole or part of the tax that they may be required by law to withhold.

⁷ An unusual instance of the option of conversion being granted to the company issuing the bond is the convertible bonds of the Mount Royal Hotel Company. Not long after these bonds were sold, the company, in order to avoid a default, exercised its option of converting the bonds into preferred stock.

however, is usually restricted to a fixed period and can be availed of only at a definite rate of exchange. Thus, a \$100 par value of bonds may be convertible during a period of five years into the same amount of stock, or the exchange may be made on the basis of \$125 of bonds for \$100 par value of stock, or *vice versa*. In a few instances, bonds have been issued with the provision that the holder may convert them at maturity into new securities. Each bond issue has its own specific terms of conversion. These should be fully known to investors before purchasing convertible bonds.

Bonds With Stock Subscription Warrants.—Within the last few years several corporations have offered to purchasers of their new obligations the right to subscribe at a fixed price to unissued shares of their respective stock. This right is evidenced by the attachment to each bond of a negotiable warrant or warrants, reciting the bondholder's privilege. The warrant will have value only when the shares of the company sell at a higher price than the subscription price stated in the warrant, or when there is a prospect or speculative possibility that the market value of the shares will advance beyond the stated subscription price. In short, the subscription privilege attached to the warrant is "a call on the stock"; a speculator, therefore, may be willing to risk paying a price for this call privilege, even though the present market of the shares may be under the "call" price.

Voting Rights.—In rare instances, bondholders, although creditors and not proprietors, have been given voting rights or some voice in the administration of the debtor companies, ordinarily exercised only by shareholders. Thus, the holders of two classes of Erie Railroad bonds (the Prior Lien and the General Lien Bonds) aggregating approximately \$70,000,000 have proportionately equal voting rights with the \$176,271,300 par value of stock. The Consolidated Sinking Fund Bonds of

the Chicago & North Western Railroad, which matured in 1915 also carried this privilege. The convertible debenture bondholders of the New York, New Haven & Hartford Railroad, although not given the voting privilege, participated in former years in the right to subscribe pro rata to new issues of stock. A more common privilege granted to certain bondholders is the right to veto by majority vote the issue of additional bonds having equal or superior equity to their own issue. Thus, the Atchison, Topeka & Santa Fe Railroad Company may issue additional Adjustment Mortgage Bonds not to exceed \$2,000,000 annually only with the approval of a majority vote in amount of the adjustment bondholders.

Participating Bonds.—Although bonds as a rule bear a fixed rate of interest, a few corporations, particularly those handicapped by poor credit, have issued bonds which give a holder a participation in surplus earnings accruing during the life of the bonds. These are known as participation issues. The extent of the participation is defined in the debt contract, but of course, the execution depends largely on the accounting methods of the debtor corporation. The examples of this class of security are so rare that it is difficult to find an adequate basis for judgment regarding the actual benefits of the participation privileges that have accrued to holders of these bonds, or to make any conjectures regarding the prospect of the extent of future corporation financing under this plan. Like many other special privileges offered bondholders, the participation privilege is merely a form of "window dressing" used to bolster up the market price or assist the sale of obligations of concerns with poor or impaired credit.

REFERENCES

(See Chapter VII)

CHAPTER IX

MECHANICS OF INVESTMENT

THE CREATION AND WHOLESALING OF SECURITIES ¹

Investment Securities—"Origination."—Since modern investment is accomplished largely through the purchase of securities, a discussion of the mechanics of investment should begin with a description of their "origination"—how they are produced. Governments and corporations, the principal sources of security issues, originate and dispose of their obligations in much the same way. A city desiring funds for the construction of public improvements or for some other purpose requiring heavy cash outlay, finds that borrowing from banking institutions is not available, and accordingly, when authorized by statute, resolves through proper legislative action, to negotiate the sale of bonds. When private negotiation is not desirable, or is prohibited, the city publicly invites competitive bids for its obligations. Except in cases of relatively small amounts, the bidders are banking institutions or investment concerns.

Similarly, a large corporation in need of additional capital, or desirous of readjusting its capitalization or when requiring the funding of its current indebtedness usually must seek the intermediary of an investment or banking concern. The procedure may vary in individual cases, but, with rare exceptions, the instrumentality of those making a business of providing capital must be resorted to in some way or other. Occasionally, individual corporations seek to avoid the use of middlemen in procuring capital funds by offering securities for sale

¹ The limitations of space prevent the author from presenting in detail the subject matter of this chapter. Students and readers desiring a more complete analysis and description are referred to the treatises given in the list of references at the end of this chapter.

directly to investors or to their own stockholders. When the offering is limited to stockholders, the latter are given the privilege of transferring the right or option to purchase. At times, when the price at which the securities are offered are under the intrinsic or market value, this "right," becomes valuable and thus accrues to the profit of the stockholder.

A number of public utilities have inaugurated the practice of selling their shares to customers. This "customer ownership" plan has a double advantage. It procures capital without the expense of dealers' commissions or underwriters' profits. It also creates a pecuniary interest of the customer in the financial welfare of the corporation, thus allaying the natural antagonism between consumer and producer. Stock distribution among employees has a somewhat similar purpose, and is carried out on a restricted scale by several large industrial companies (*e.g.*, the United Steel Steel Corporation, International Harvester Corporation, etc.). Although it is the common practice for corporations to offer additional issues of stock to their shareholders or employees, it is only occasionally that bonds or notes are negotiated in this manner² Moreover, even when shares are offered to stockholders, it is frequently desirable or essential to the corporation to have bankers "underwrite" the issue (*i.e.*, agree to take over at a determined price the portion that is not subscribed for) in order to be assured that the amount will be fully distributed.³ The Pennsylvania Railroad Company, the Standard Oil Company of New Jersey and other wealthy industrial and railroad corporations that regularly offer new stock to their shareholders have followed this policy. As compensation for underwriting a security issue offered to shareholders, the bankers receive a commission

² The corporation laws of several states, and the by-laws of many corporations require that additional stock must be first offered to shareholders.

³ Occasionally, individual capitalists or the directors of a corporation will subscribe to new security issues. Thus, the Western Maryland Railroad in 1913, sold largely to its directors individually \$6,000,000 of unsecured notes. A proceeding of this kind is an indication of impaired credit.

on the total amount offered, regardless of whether they are required or permitted to take over any of the shares or not.

In reorganizations of corporations following bankruptcy and receivership, or in readjustments of capitalization, the assistance of bankers as "underwriters" or as reorganization managers is also usually required. Under such circumstances, the new securities may be not readily marketable among the old security holders or the general public. In order to assure the success of the reorganization plan, therefore, banking support is required. By this means, the funds essential to complete or effect the reorganization company is guaranteed, since the new securities if not taken by the public or by the owners of the outstanding securities of the bankrupt concern are purchased at an agreed price by the underwriting bankers.

The Functions of Investment Bankers.—The function of investment banking differs little fundamentally from the function of banking in general. Expressed briefly, banking's chief purpose is to take idle or unproductive capital and apply it to productive uses. The direction of the flow of capital is thus the chief function of investment banking. It differs from commercial banking mainly in its field of operations.

As pointed out in Chapter VI, commercial banking applies funds to temporary use in a form that is self-liquidating. Investment banking, on the other hand, deals in capital funds that are to be expended for permanent purposes. This has been aptly termed "sunk capital."⁴ The credit instruments representing "sunk capital" may change, and may even disappear by redemption or otherwise, but as long as the property or assets acquired through this capital are preserved for profitable use or are converted into other assets equally productive, the capital is maintained intact.

Since the economic function of investment bankers is to direct the flow of capital funds, the purpose is best accom-

⁴ Gunnison Brown, *The Principles of Commerce*.

plished by turning the stream from the least profitable into the most profitable channels. This task may not be accomplished in every operation, or at all times, but it is the prime motive underlying the banking business in general. Its proper performance involves: (1) analysis, investigation and research, and (2) the underwriting and distribution of securities among investors. Each of these will be considered in turn.

Investigation, Analysis and Research.—Investment bankers avail themselves of all possible sources of financial, economic and industrial information. When considering the financing of a new business organization, or the purchase of securities of an established concern, they institute inquiries not only with respect to the credit standing, financial condition and future prospects of the particular concern in question, but also analyze further the economic conditions and other factors relating to the industry as a whole. A thorough analysis of the broad factors and conditions underlying investment values is exceedingly difficult. It requires considerable time and expense in addition to the exercise of skilled judgment. The leading investment banking houses, as well as corporation promoters and practical and experienced financiers find it profitable to employ in this work expert engineers, accountants and economists. Many stock exchange brokerage firms also maintain elaborate statistical and investigation departments for the protection and benefit of their clients. The services of financial research and investigation cover both the study and interpretation of underlying economic, industrial and political conditions, and the trends and developments in separate lines of business. Both lines of inquiry are essential to the operations of successful investment.

The Analysis of Business Conditions.—Whatever may be the disturbing and detrimental effects of professional manipulators and stock gamblers, it is a clearly demonstrable fact that

investment values as a whole are determined by prevailing fundamental economic and industrial conditions, each closely related and interwoven with the others, difficult to summarize and almost impossible to apply singly at a given time. Largely from the study and interpretation of these underlying conditions, practical financiers and investment bankers gauge the prospects of success or failure of their financial underwriting. Briefly summarized, the best known tests for studying prevailing conditions of prosperity or depression, and for forecasting the future trend of business affairs, are :

1. The exchange of bank cheques (clearings) showing the volume of business transactions.
2. Aggregate bank loans and deposits showing the expansion and contraction of credit.
3. Railroad earnings, showing the movement of commodities.
4. New building construction, showing the demand for productive facilities.
5. Commercial failures, indicating the relative profitableness and unprofitableness of business operations.
6. Price changes of important industrial and basic commodities, such as iron, coal, copper, oil, cotton, etc.
7. Acreage, yield and value of the important crops, showing the new wealth produced from the soil.
8. International trade conditions, which determine international exchange rates and the monetary gold supply.

The importance and value of the foregoing and other tests not mentioned undergo constant change. To accept one or even a few from among the many as a basis of judgment regarding fundamental business conditions may be wholly misleading. Industrial affairs are in constant flux. The introduction of new processes, the ceaseless variation in the uses of raw materials, and in the demand for commodities; the changes in business organization and in the methods of conducting business transactions, all require proper weighing and careful inter-

pretation. The barometers of business, moreover, when used as a guide to investment conditions, must be free from disturbing political and economic conditions. The unsettling of investment values through actual or threatened adverse legislation or through inequitable taxation has been experienced in every epoch of American financial history, and furnishes ample proof of the inability of bankers or financiers to uphold security values or promote new enterprises under unfavorable political circumstances, even though industrial landmarks point to favorable economic conditions.⁵

Investigation of Corporation Affairs.—In addition to the correct interpretation of underlying economic, political and industrial conditions as a guide to corporate financing, investment bankers inquire closely into the affairs of corporations, municipalities or governments desiring to sell securities. The information sought and the problems discussed will be covered in the following chapters relating to the various groups and kinds of securities. Indeed investment bankers demand the same knowledge of a corporation's financial status as the individual investor—but in greater detail and with closer scrutiny. In obtaining the knowledge, they frequently employ in addition to their own specialists reliable engineering and accounting firms. Engineering examinations, appraisals and audits are indispensable in most industrial financing. An exception may be made in the financing of established railroads and public utilities when reports of this character may not be demanded because public regulation and supervision and pre-

⁵ In gauging security values on the basis of general business conditions, there is always danger of looking backward instead of forward. "Wall Street" discounts in advance not only all that is probable but also all that is possible. Thus, the financial panics of the autumn of 1907 and the spring of 1921 had been largely discounted by decline in security values a number of months before the actual advent of panicky conditions. On the other hand, during the years 1908 and 1922, years of business depression and stagnation following the collapse of values, security prices moved slowly upward and new industrial financing became manifest. When recovery in both cases finally set in values were already inflated, resulting in renewed declines of values. Thus, the process of "discounting" changes in industrial conditions goes on apace.

scribed systems of accounting and auditing, that these companies follow, furnish ample information to the bankers.

New York Stock Exchange Listing Requirements.—The demand for thoroughgoing and adequate information of the affairs of corporations whose securities are marketed among investors has the support of the best Wall Street interests. With the possible exception of the Interstate Commerce Commission, no agency in America has been more influential in promoting corporate publicity than the New York Stock Exchange. Before securities are permitted to be dealt in on the floor of the Exchange, the issuing company must submit a certified statement concerning its corporate objects, its organization, its history and financial condition. The company further agrees to publish and to submit at least once a year or more frequently, if required, to its stockholders an income statement and a general statement of financial condition at the end of the period.⁶ (See Appendix B.)

Arranging Terms of the Security.—When investment bankers have satisfied themselves that the financial and other conditions relating to a corporation are such as to warrant underwriting its securities, other important matters must be settled before the issue is offered to the investment public. These relate to the amount of the issue, the character of the security (whether mortgage bonds, debentures, preferred or common shares) the rate of interest or of dividends, maturities, amortizations, redemptions and, last but not least, the price. All the problems, if properly solved, should be fair both to the concerns requiring financing and to investors. Successful

⁶ Regarding the listing requirements of the New York Stock Exchange, the report of the Investigation Committee, appointed by Governor Hughes in 1909, remarks:

"The Committee on Stock List is one of the most important parts of the organization, since public confidence depends upon the honesty, impartiality and thoroughness of its work. While the Exchange does not guarantee the character of any securities, or affirm that the statements filed by the promoters are true, it certifies that due diligence and caution have been used by experienced men in examining them. Admission to the list, therefore, establishes a presumption in favor of the soundness of the security so admitted."

banking of all kinds implies that the terms imposed should be alike profitable or beneficial both to the borrower and to the lender. To saddle a corporation with fixed charges that it is incapable of meeting, or to require repayment of advances at a time or in a manner that may impair its cash resources or hamper its operations, in the end usually results in insolvency of the borrower and injury to investors.

Underwriting of Securities.—In underwriting (*i.e.*, purchasing or guaranteeing the sale of securities) investment bankers act as wholesalers or middlemen. When the issue is a large amount or more than a single banking house desires to handle alone, co-operation or partnership in the operation is invited. Such co-operation in the sale of securities takes the form of joint accounts or syndicates. As a rule, a financing proposition is originally brought to one banking concern. If this concern, after investigation, desires to handle the business, but requires the aid of others in order to distribute the risk or to obtain the capital required for the purpose, it will draw up a memorandum of the proposition, and submit it to one or more other banking concerns. Participation may be invited on a strict joint account basis (*i.e.*, in which expenses, profits and losses are shared equally) or on a “syndicate” basis, in which the originating house, having made its terms direct with the borrower to whom it alone is responsible offers participation to other houses at a fixed or syndicate price. The originating house or houses are known as the “syndicate managers.” The offer is usually accompanied by a written syndicate agreement, to be signed by the accepting members thereof. Opposite the signature, the amount of the securities “underwritten” is set down.

When the “syndicate” is made up, and the definite allotments to each member made, a new “group” is arranged for the distribution of the securities. This is known as the “selling group.” It generally includes the “underwriting group,”

with many additional members. To each of the selling group is allotted a certain amount of the new issue at a new price, usually slightly higher than that at which the underwriting syndicate takes the securities. Moreover, the selling group do not generally have to bear a proportionate amount of the expense of carrying or distributing the bonds. Each member of the selling group usually designates in writing or otherwise, whether it proposes to "take up" its allotment, or whether it will stand ready to take over its proportionate amount of the issue that remains unsold after the final offering has been made. When securities are taken up by a member of the selling group, such member is said to have them "firm," and is thus assured a definite amount to distribute among its customers. Moreover, the member taking "firm bonds" makes an additional profit in the allowance of a selling commission. A typical letter inviting participation in a selling group is given herewith.

(Copy of Selling Group Letter)

Dear Sirs:

We invite you to join a Selling Group, of which we shall be the Managers with full discretionary power and in which we shall participate, to offer for public subscription \$1,500,000 par value of 7% Cumulative Preferred Stock of The North Power Company. We are enclosing a circular describing this issue.

OFFERING
PRICE

This stock will be offered to the public on Wednesday, February 4, 1925, at \$96.50 flat per share. From this price a selling commission of \$2.00 per share (less expenses not to exceed 25 cents per share) will be allowed to group members on confirmed allotments, of which 25 cents per share may be reallocated to other dealers and financial institutions. This selling commission will be paid at the termination of the account, except as hereinafter provided.

SUBSCRIP-
TIONS

Subscriptions for this stock will be received at the office of Syndicate Managers. The right is reserved in our sole discretion to close the subscription books without notice, to reject any subscription in whole or in part, or in any event to allot less than the amount applied for. Subscriptions reported by telephone or telegraph should be confirmed by letter.

DELIVERY

It is expected that stock certificates in permanent form will be ready for delivery at the office of Syndicate Managers, on or about February 9, 1925. Deliveries will be made against payment in New York funds at \$96.50 flat per share.

REPURCHASED STOCK	We reserve the right to retain the Selling Commission of \$2.00 per share upon any stock originally delivered to you which may be repurchased by us in the market at or below the offering price during the existence of this Selling Group.
LIABILITY	Other than your obligation to make payment for stock allotted to you upon your subscription and to comply with the other provisions of this letter you will have no commitment.
ADVERTISE- MENT	The Managers' advertisement of this offering will appear on Wednesday, February 4, 1925, after which date Group Members may advertise at their own expense.
TERMINATION	The Selling Group will terminate thirty days from this date, but the Managers reserve the right to extend it for an additional period not in excess of thirty days, or to terminate it at any time.
MANAGERS' COMPENSA- TION	We shall make no charge for our services in forming and managing this Selling Group or for its expenses, as the offering price of the stock includes a profit to us and to our associates.
MANAGERS' LIABILITY	Neither the Managers nor their associates shall be under any liability with respect to the validity or value of the shares offered, or the terms or representations contained in the letters, circulars or certificates, or any covenants made by the Company; nor shall they be liable under any of the provisions of this agreement or otherwise save for their individual wilful malfeasance.
LISTING	The entire issue of The North Power Company 7% Cumulative Preferred Stock at present outstanding, including the amount offered herein, is listed on the New York Stock Exchange.

Very truly yours,

.....
SYNDICATE MANAGERS.

REFERENCES

- GALSTON, ARTHUR. *Security Syndicate Operations*. New York, Ronald Press Co., 1925, 95p.
- LYONS, HASTINGS. *Corporation Finance*. Boston and New York, Houghton, Mifflin & Co.
- MOULTON, H. C. *Financial Organization of Society*. Chicago, The University of Chicago Press, 1920, 789p.
- STURGIS, H. S. *Investment, a New Profession*. New York, The Macmillan Co., 1924, 210p.

CHAPTER X

MECHANICS OF INVESTMENT

PUBLIC DISTRIBUTION AND NEGOTIATION OF SECURITIES

Distributing Securities.—Following the formation of a "selling group," as described in the previous chapter, the syndicate managers underwriting a new issue of securities generally make a public offering, an example of which is here given.

(Copy of Offering Circular)

NEW ISSUE

\$23,500,000

Oklahoma Gas and Electric Company

First Mortgage 5% Gold Bonds

DATED MARCH 1, 1925

DUE MARCH 1, 1950

Interest payable March 1 and September 1, in New York and Chicago. Redeemable on any interest payment date, until and including March 1, 1930, at 105 and interest, the premium decreasing 1% each five years thereafter, the Bonds being redeemable on September 1, 1949, at 100% and interest. Coupon Bonds of \$1,000 and \$500 denominations, with privilege of registration as to principal and fully registered Bonds in denominations of \$10,000, \$5,000 and \$1,000.

The Company will agree to pay interest without deduction for the normal Federal Income Tax not exceeding two per cent and to refund, upon proper application, the Pennsylvania personal property tax not exceeding four mills, the Connecticut personal property tax not exceeding four mills, the Maryland securities tax not exceeding four and one-half mills, and the Massachusetts income tax not exceeding six per cent, to holders resident in those states.

CONTINENTAL AND COMMERCIAL TRUST AND SAVINGS BANK, CHICAGO, TRUSTEE.

The accompanying letter of Mr. J. J. O'Brien, President of the Company, has been summarized as follows:

PROPERTY: Oklahoma Gas and Electric Company serves electricity or natural gas to 88 cities and towns, including Oklahoma City, El Reno, Enid, Drumright, Sapulpa, Muskogee, Shawnee and Ada, located in the richest and most populous sections of Oklahoma and having a combined estimated population of over 375,000.

Total generating capacity of the Company aggregates 89,000 horsepower, including the River Bank Power station located near Muskogee with an initial capacity of 30,000 horsepower and the Horse Shoe Lake power plant near Oklahoma City with an initial capacity of 20,000 horsepower, both of these plants having been placed in operation during 1924.

Over 984 miles of inter-connected power lines link the new power plants with the entire system of the Company, making possible the transfer of electric loads to insure continuity of service at all times.

PURPOSE OF ISSUE: The proceeds from the sale of these Bonds and other securities will provide funds to retire the entire present outstanding funded debt of the Company and of its subsidiaries, Southern Oklahoma Power Company, Shawnee Gas and Electric Company and Oklahoma General Power Company, the properties of which will be transferred to Oklahoma Gas and Electric Company and subjected to the direct lien of the new Mortgage.

SECURITY: These Bonds will be secured by a direct first mortgage on all fixed property of the Company, including that of all present subsidiaries, the property of which will be transferred to the Company in the present financing.

CAPITALIZATION

(Giving effect to present financing)

	Outstanding
First Mortgage 5% Gold Bonds, due March 1, 1950 (this issue)	\$23,500,000*
6% Gold Debentures, due March 1, 1940.....	8,000,000
7% Cumulative Preferred Stock.....	9,000,000
Common Stock.....	7,500,000†
*Additional Bonds to be issuable, in series, under conservative mortgage restrictions.	
†\$4,500,000 Common Stock now outstanding and \$3,000,000 cash subscription for other Common Stock.	

EARNINGS

(Of properties to be Covered by the Mortgage)

FOR THE 12 MONTHS ENDED JANUARY 31, 1925:

Gross Earnings.....	\$8,077,607
Operating Expenses, Maintenance and Taxes, excluding Depreciation	5,424,944
Net Earnings	\$2,652,663
Annual Interest Requirement on \$23,500,000 First Mortgage 5% Gold Bonds (this issue).....	\$1,175,000

ABOVE NET EARNINGS OVER $2\frac{1}{4}$ TIMES ANNUAL BOND INTEREST REQUIREMENT.

GENERAL: Over 78% of the present net earnings of the properties to be owned and mortgaged by the Company is derived from the sale of electric power and light. During the past ten years gross earnings of such properties increased over 262% and net earnings increased over 222%.

The year 1925 should show a substantial increase in net earnings. Aside from the new business now available for service from the two large power plants recently completed, the Company will receive full benefit of lower operating costs arising from the operation of these plants.

The number of preferred shareholders now exceeds 5,000, approximately 1,700 of whom were added under the Customer Ownership plan during 1924.

The above Bonds are offered for delivery when, as and if issued and received by us and subject to the approval of Roberts and Montgomery, Philadelphia, as to legalities. Interim receipts of Continental and Commercial Trust and Savings Bank, Chicago, exchangeable for definite Bonds, when, as and if issued, are expected to be available for delivery on or about March 20, 1925.

Price 95 and Interest to yield over 5.36%

In the public offering the price to investors is definitely fixed, but brokers and dealers are allowed a discount or selling commission. In order to avoid price-cutting by syndicate members or by the "selling group," there is either a direct or implied agreement that sales to individual investors will not be made under the stipulated price. Frequently, to protect the "market" against the effects of short-selling of the new issue by speculators desiring to depress the price, the syndicate arranges to purchase on a recognized security exchange offerings of the new issue at or below its own offering price. The purchases continue during the period in which the issue is being distributed or before the syndicate is dissolved. When actual delivery of the certificates covering such sales is made, the syndicate managers as purchasers in the open market are enabled to ascertain by the serial numbers on the certificates re-delivered to them the dealers (or the dealers' customers) who have sold out in the open market. The "guilty party" is traced in this way, and at times there is an agreement that such repurchased securities are charged back to the members of the selling group whence they came. Dealers who make a practice of cutting the price or of disposing of bonds in the open market under the issue price before the "selling restrictions" are removed, are as a rule cut off of future syndicate participations or selling groups. Accordingly, sales during the life of a syndicate are supposedly made for "guaranteed investment." By this is meant that the securities sold are to be held by the purchaser or at least not sold under the "offering price" as long as the syndicate has not been dissolved and the selling restrictions removed.

Syndicate Loans.—In the distribution of new securities from the time they are purchased by the originating banking house until they get into the hands of investors there are various expenses and costs which cut into the gross profits obtained in the operation. These costs comprise not only the wholesale

discounts, selling commissions, advertising expenses and the like, but also the expense of "carrying" the issue during the period that the distribution is taking place. As borrowers who sell new securities to bankers usually require the cash immediately, or within a short time after the sale is arranged, provisions must be made with commercial or other banking institutions for loans of cash to effect the purchase. The common practice is for the underwriting syndicate to make arrangements with a group of banks for a loan of the whole or a large part of the amount paid over to the borrowers. The new securities are almost invariably pledged with the loaning banks as security, and as the loan is paid off from the receipts of the sale the pledges are proportionately released. The costs of making such loans in "carrying" the securities is a part of the syndicate expense and is ratably charged against the syndicate members.

Trading in Securities.—Investment banking houses, in addition to originating and distributing securities, also assist in giving marketability to investments. This function is performed through the trading departments. Many investment houses specialize in certain classes of securities, and are at all times ready to purchase or sell either at wholesale or retail, at prices quoted by them. Frequently, they maintain markets for their own offerings or so-called "originations," long after public distribution has taken place. This is a very important function since, as already pointed out, ready marketability is one of the factors of an "ideal" investment. In their trading operations, the banks and investment houses may act as brokers or as merchants. As brokers they merely advertise publicly or among dealers the "bids" and "offers" of their customers, charging a commission when transactions are effected. As dealers, they buy and sell on their own account, their profits, if any, arising from the spread between the price at which they buy (the "bid") and the price at which they sell (the

"offer"). Thus, Virginian Power First and Refunding $6\frac{1}{2}\%$ Bonds, due 1953, will be quoted by the house specializing in this issue at "96 bid, offered at 100." This means that they will buy the bonds at 96%, and sell at 100% of par value. Occasionally, the amounts in each case are specified when the "bids" and "offers" are given. Quotations are sometimes made "subject" to confirmation or to change. These are termed "nominal" bids and offers. Transactions, moreover, may be made at prices between the "bid" and the "asked," since the higgling of the market fixes security values in the same manner as in the case of commodities, goods and other property.

When securities are listed on an exchange, the value at any time is determined by the prevailing registered "bid" and "asked" quotations. These quotations change constantly. Moreover, the prices generally apply to definite amounts. Thus, the Hungarian 7% Bonds, due 1944, may be quoted $88\frac{1}{2}$ bid, offered at $88\frac{3}{4}$, but the amount desired to be purchased at $88\frac{1}{2}$ is \$10,000, whereas the offered amount at $88\frac{3}{4}$ is but \$1,000. Under these conditions, a transaction does not necessarily take place should either party raise or lower the quotation to meet that of the other. On the New York Stock Exchange, bonds are sold in units of \$1,000, and shares ordinarily in 100 share lots. Smaller amounts, as stated on page 44, are known as "odd lots" and are purchased or sold by the "odd lot" dealers who, however, base their prices on the exchange quotations. These "odd lot" dealers obtain their profits by buying at a fractional discount under or selling at a fractional premium above the last regular transaction in the security.¹

Terms of Sale.—Security trading or dealing in investments is not generally a simple matter of transfer and delivery of the paper certificates or other evidence of ownership.

¹ On the London Stock Exchange, there is a class of dealers termed "stock-jobbers" who at all times will quote prices at which they will buy and sell the listed securities. These deal only with other members who are the "brokers." No arrangement of this sort exists on the New York or other stock exchanges in the United States.

There are rules, customs and practices which are regularly followed, and which have received judicial sanction. When transactions take place through brokers on an organized exchange, such transactions are subject to the rules imposed by the exchange. "Over-the-counter" transactions (*i.e.*, those which occur privately, whether consummated directly by negotiation between buyer and seller or through dealers and brokers) generally, in the absence of special agreements, follow the common practices of the exchanges. Thus, it is a rule of the New York Stock Exchange that bonds bearing a fixed rate of interest and not in default are quoted "and interest." This means that the purchaser is to pay the quoted price, plus the accrued interest to the date of delivery. The practice is also followed in bond transactions "over the counter," though by special arrangement it may be altered. Another stock exchange rule requires delivery of the securities before 2:15 P. M. the day following sale. This is called "regular" way or "N. D." (next day). However, when stipulated in the transaction, delivery may be deferred to a definite time, or may be at "buyers'" option or "sellers'" option. Thus, when securities are sold "seller thirty," it means that the seller has thirty days in which to make delivery, and when it is designated "buyer thirty," the buyer has the option of delaying delivery at any time within this period. The New York Stock Exchange rules stipulate that such options must not run for less than three, nor more than sixty days, and on all options over three days, written confirmations must be exchanged on the day following the transaction. Occasionally "cash" sales take place on the exchange. These require delivery and payment on day of sale. Such "cash" sales are generally the result of failure to deliver under a "regular" transaction, which gives the purchaser the right to "buy in" for immediate delivery an equal amount of the same security on the exchange, and charge any loss that may result to the purchaser.

Delivery of securities may be made conditional. Thus, new issues are generally sold on a "when issued" basis, both in public offerings and in stock exchange transactions. In this way, the seller secures himself against suit for breach of contract in the event the securities sold are never issued. Investment houses which make original offerings usually stipulate that sales are made "when, as and if issued and received by us and subject to approval of counsel." Such stipulations avoid much of the possibility of damage suits when offerings are withdrawn from the market or when legal complications in the creation of securities arise.²

Offerings are also made subject to prior sale or to change in price, or subject to allotment or rejection, and are thus distinguished from "firm" offerings. The latter are generally limited as to time of acceptance.

As pointed out above, it is the common practice for sellers to charge purchasers in addition to the price of fixed interest bearing bonds, the accrued interest to date of delivery. Income bonds the nature of which is explained on page 88, and bonds on which the interest is not being paid are sold "flat," *i.e.*, without the addition of accrued interest. Bonds issued in foreign currencies, the interest on which is not payable at a fixed rate of exchange, are also regularly sold "flat." The price of these securities, other things being equal, will accordingly be reduced following the date of interest payment by the amount of such payment. On the other hand, as the interest date approaches, the price tends to rise, since the quotation carries with it the interest accrual to date of sale. All stocks, whether preferred or common, are regularly sold flat, though offerings are frequently made, especially in the case of preferred stock, at a definite price "and accrued dividend."

² The rescinding of an offering of \$12,000,000 of the California Division, Pan American Petroleum and Transport Company First Mortgage Convertible Bonds in February, 1924, as a result of the oil lands lease scandals exposures, is an illustration of the importance to bankers of definitely stating the terms of sale and delivery in their public offerings of new securities.

Computing Investment Income.—Government and municipal bonds, together with railroad equipment obligations, are in many instances offered to investors or traded on an income yield basis. By this is meant that the actual price paid is to be fixed at the date of sale or delivery in accordance with a standard computation which will give the purchaser an expected annual income of a certain per cent on the amount paid, provided he holds the security to maturity. Perhaps nothing is more puzzling to the inexperienced investor when making bond purchases than the proper distinction between “current income” and “yield.” The income is represented by the interest rate attaching to the bond. In the case of a 5% bond, it would be \$50 on a face value of \$1,000, and on a 6% bond of the same amount, it would be \$60 per year, whether paid quarterly, semi-annually or annually. In figuring the yield, however, there must be taken into consideration not only the interest rate, but the price paid for the security and the period of time between the purchase date and the maturity date, when it is to be paid at its face value.³ A bond selling at a discount, or less than 100% of its face value, would return the investor, if held to maturity, a higher yield than its income or interest rate, and a bond selling at a premium, or over 100% of its denomination, would return a smaller yield than the interest income. In the latter case, the investor will, if he retains the bond to maturity, lose his premium which, accordingly, should be cancelled or “amortized” during the period if he is to estimate correctly his actual return from the investment.

Yield Computations.—The rate of income yield on the *sum invested*, as distinguished from the interest yield rate on the *par value* of the bond, is commonly termed *the basis*. To determine the basis, it is necessary to know:

³ There are several bonds outstanding, mostly foreign, that are repayable at a premium over the face value. Thus, the State of San Paulo 8% bonds due 1936 are repayable at 105, or \$1,050, instead of \$1,000, the face value on which the interest rate is computed.

First, the purchase price of the bond.

Second, the fixed interest it bears.

Third, the number of interest payments during the year.

Fourth, the number of years to maturity.

These facts being ascertained, the basis may be found in a standard table of bond values.

By reference to a bond table, a page of which is shown in Figure 1, it is seen that if a bond of the par value of \$1,000, maturing in seven years, bearing interest at 5% payable semi-annually, is purchased for \$1,060.53, the investment earns only 4%. The bond, accordingly, has been purchased on a 4% basis.

At the end of the first six months the interest earned on the investment is \$21.21 (at the rate of 4% per annum on \$1,060.53), the interest received on the par value of the bond is \$25.00, the difference between the two amounts being \$3.79.

The theory of scientific amortization is that the difference between the *interest earned* on the investment and the *interest received* on the par value (in the example given, \$3.79) is not income but principal. As a bond purchased above par approaches maturity, there is an inherent and intrinsic depreciation in its value, and the amount of this depreciation at each interest period is the difference between the "interest earned" and the "interest received." It will be seen from Figure 1 that

The value of a 5% bond purchased on a 4% basis with seven years to run is.....	\$1,060.53
The value of the same bond with six and one-half years to run is.....	1,056.74
The depreciation during the first interest period being	\$3.79

Collection of Investment Income.—The periodical income on securities may be received directly from the corporation or its paying agency by cheque, as in the case of stock dividends and registered bonds, or may be collected by presenting warrants or "coupons" payable at fixed dates, and which are gen-

Seven Years

Interest Payable Semi-Annually

% per an.	2½%	3%	3½%	4%	4½%	5%	6%	% per an.
4.00	90.9203	93.9469	96.9734	100.0000	103.0266	106.0531	112.1063	4.00
4.05	90.6342	93.6554	96.6766	99.6979	102.7191	105.7404	111.7828	4.05
4.10	90.3490	93.3649	96.3809	99.3968	102.4128	105.4287	111.4606	4.10
4 ¼	90.2068	93.2201	96.2334	99.2467	102.2600	105.2733	111.2998	4 ¼
4.15	90.0649	93.0755	96.0862	99.0968	102.1075	105.1181	111.1394	4.15
4.20	89.7817	92.7871	95.7925	98.7979	101.8032	104.8086	110.8193	4.20
4.25	89.4996	92.4997	95.4998	98.4999	101.5001	104.5002	110.5004	4.25
4.30	89.2185	92.2134	95.2082	98.2031	101.1979	104.1928	110.1825	4.30
4.35	88.9384	91.9280	94.9176	97.9073	100.8969	103.8865	109.8657	4.35
4 ⅜	88.7987	91.7857	94.7727	97.7597	100.7468	103.7338	109.7078	4 ⅜
4.40	88.6593	91.6437	94.6281	97.6125	100.5969	103.5813	109.5501	4.40
4.45	88.3812	91.3604	94.3396	97.3187	100.2979	103.2771	109.2355	4.45
4.50	88.1041	91.0780	94.0520	97.0260	100.0000	102.9740	108.9220	4.50
4.55	87.8279	90.7967	93.7655	96.7343	99.7031	102.6719	108.6095	4.55
4.60	87.5528	90.5164	93.4800	96.4436	99.4073	102.3709	108.2982	4.60
4 ⅝	87.4156	90.3766	93.3376	96.2987	99.2597	102.2208	108.1429	4 ⅝
4.65	87.2786	90.2370	93.1955	96.1540	99.1125	102.0709	107.9879	4.65
4.70	87.0054	89.9587	92.9120	95.8653	98.8187	101.7720	107.6786	4.70
4.75	86.7331	89.6813	92.6295	95.5777	98.5259	101.4741	107.3705	4.75
4.80	86.4619	89.4049	92.3480	95.2911	98.2342	101.1772	107.0634	4.80
4.85	86.1916	89.1295	92.0675	95.0055	97.9434	100.8814	106.7573	4.85
4 ⅞	86.0568	88.9922	91.9276	94.8630	97.7984	100.7339	106.6047	4 ⅞
4.90	85.9222	88.8551	91.7879	94.7208	97.6537	100.5866	106.4523	4.90
4.95	85.6538	88.5816	91.5094	94.4372	97.3650	100.2928	106.1484	4.95
5.00	85.3864	88.3091	91.2318	94.1545	97.0773	100.0000	105.8455	5.00
5.05	85.1199	88.0375	90.9552	93.8729	96.7906	99.7082	105.5436	5.05
5.10	84.8543	87.7669	90.6796	93.5922	96.5048	99.4175	105.2427	5.10
5 ⅛	84.7219	87.6320	90.5421	93.4522	96.3624	99.2725	105.0927	5 ⅛
5.15	84.5897	87.4973	90.4049	93.3125	96.2201	99.1277	104.9429	5.15
5.20	84.3260	87.2286	90.1312	93.0338	95.9364	98.8390	104.6441	5.20
5.25	84.0633	86.9609	89.8585	92.7560	95.6536	98.5512	104.3464	5.25
5.30	83.8015	86.6941	89.5867	92.4793	95.3719	98.2644	104.0496	5.30
5.35	83.5406	86.4282	89.3158	92.2034	95.0911	97.9787	103.7539	5.35
5 ⅓	83.4105	86.2956	89.1808	92.0659	94.9510	97.8362	103.6064	5 ⅓
5.40	83.2806	86.1633	89.0459	91.9286	94.8112	97.6939	103.4592	5.40
5.45	83.0216	85.8993	88.7770	91.6547	94.5324	97.4101	103.1655	5.45
5.50	82.7635	85.6362	88.5090	91.3817	94.2545	97.1272	102.8728	5.50
5.55	82.5063	85.3741	88.2419	91.1097	93.9776	96.8454	102.5810	5.55
5.60	82.2500	85.1129	87.9758	90.8387	93.7016	96.5645	102.2903	5.60
5 ⅝	82.1222	84.9826	87.8431	90.7035	93.5640	96.4244	102.1453	5 ⅝
5.65	81.9946	84.8526	87.7106	90.5686	93.4266	96.2846	102.0006	5.65
5.70	81.7401	84.5932	87.4463	90.2994	93.1525	96.0056	101.7119	5.70
5.75	81.4865	84.3347	87.1830	90.0312	92.8794	95.7277	101.4241	5.75
5.80	81.2338	84.0772	86.9205	89.7639	92.6073	95.4506	101.1373	5.80
5.85	80.9820	83.8205	86.6590	89.4975	92.3360	95.1745	100.8516	5.85
5 ⅞	80.8564	83.6925	86.5286	89.3647	92.2008	95.0368	100.7090	5 ⅞
5.90	80.7311	83.5647	86.3984	89.2321	92.0657	94.8994	100.5667	5.90
5.95	80.4810	83.3099	86.1387	88.9675	91.7964	94.6252	100.2829	5.95
6.00	80.2319	83.0559	85.8799	88.7039	91.5279	94.3520	100.0000	6.00
% per an.	2½%	3%	3½%	4%	4½%	5%	6%	% per an.

Figure 1

erally attached to the security certificate. The coupon bond takes its name from the French word "couper," to cut, because the certificates of interest are printed on the same sheet as the bond certificate, or attached thereto. The coupons may be detached at any time and sold, whether before or past due. If the holder wants to anticipate his interest, he can cut off the coupons and sell them at a discount if others are willing to purchase. If coupons maturing at a future date are detached from the bond, the bond cannot be sold "regularly" until after the maturity of the coupon, as the absence of the coupon prevents the bond from being a "good delivery."

Coupon bonds are payable to bearer, and, accordingly, the debtor or obligor need have no record of their ownership. As their transfer through sale or otherwise is by simple delivery, coupon bonds may be lost or stolen without the owner having any recourse against the debtor concern by whom they were issued. It therefore may be hazardous for investors, unless they have vaults or safe deposit boxes at their disposal, to hold coupon or bearer bonds. Moreover, in order to obtain the interest as it becomes due, it is generally necessary to have the bonds in a place convenient of access to the holder.⁴ For these and other reasons, many investors prefer to hold "registered" bonds.

When a bond is registered, a record of the owner is kept by the debtor concern or its fiscal agency, and a transfer of ownership is not recognized without written notification on the part of the seller, who must also assign the bond to the debtor or its agent with power of attorney to make the transfer. Hence, a registered bond is said to have limited negotiability. On this account it generally sells at a fractional discount below the coupon or bearer securities.⁵

⁴ This difficulty is overcome through the assistance of trust companies, banks and investment houses, who maintain "safe-keeping departments" for their clients, and who collect interest when due. Banks and trust companies charge moderate fees for this service.

⁵ Bonds may be made registerable as to principal, or as to both principal and interest. If registerable as to principal only, they do not differ in appearance from coupon bonds, a notation of the fact of registration merely appearing on the bond

Registrars and Transfer Agents.—As a protection against forgery, over-issue, and fraudulent transfers, all certificates representing investment securities should bear a registrar's certification. Trust companies and banks authorized to perform this service are generally appointed registrars for both stock and bonds. These institutions maintain records of the amount and the numbers of the certificates authorized and issued, and certify to the genuineness of the signatures on the bonds. Most stock certificates, particularly of issues listed on the New York Stock Exchange, contain the legend "This certificate is not valid until countersigned by the transfer agent, and registered by the registrar." The transfer agent keeps the stock book and maintains a record of the transfer, issuing a new certificate in the name of the party to whom the shares are transferred. The registrar then registers the number of the new certificate and cancels the old certificate. As the purpose of both transfer and registration is a double check against counterfeit and fraud, the same institution cannot very well act as both registrar and transfer agent for the same issue, though cases of this double function performed by the same office have come to the author's notice. Many corporations transfer their own securities, but registration is considered a service that can be performed properly only by an independent organization.⁶ The trustees appointed for the

certificate. Holders of a number of issues of coupon bonds may exchange them for registered bonds, and *vice versa*. The privilege, if granted, must be a part of the deed of trust or loan contract.

⁶ Clay Herrick, in his book "Trust Companies," defines the respective duties of transfer agent and registrars as follows: "The duty of the transfer agent is to act for the issuing corporation in the matter of making transfers of the ownership of its stock from one holder to another. This involves the passing upon the regularity and legality of the assignment of title, the noting of the transaction upon the transfer books of the corporation, the cancellation of the old certificates and the execution and delivery of the new certificates (page 413) . . . Before making delivery of the certificate, the transfer agent dates it, fills in the name of the new holder and the number of shares represented, affixes the seal of the issuing corporation, and attaches the proper signature to the transfer agent's certificate.

"The duty of the registrar of stock is to register or record the issue of certificates of stock after they have been issued by the transfer agent, for the purpose of preventing an over-issue of stock. Before assuming its duties, the registrar must be furnished with authentic information as to the total amount of stock authorized to be issued, if none has been issued, or as to the total amount of stock authorized to be issued and the amount outstanding, if part or all has been issued. After the total amount of

protection of the rights of the bondholders under a corporate trust indenture usually perform the service of registrars for the bonds.

The listing regulations of the New York Stock Exchange require not only that the office of transfer and registration of shares be performed by separate authorities, but that these offices be maintained in the Borough of Manhattan, City of New York, "where all listed securities shall be directly transferable, and the principal of all listed securities with interest or dividends thereon shall be payable." Both the transfer agent and the registrar for listed securities must be acceptable to the Committee on Stock List of the Exchange. Registrars of listed securities, moreover, must file with the Secretary of the Exchange an agreement to comply with all the requirements pertaining to registration. When stock is transferred at the office of the company which issued the securities, the transfer agent, authorized to countersign certificates, must be an individual other than the officer authorized by the company to sign its stock certificates. A corporation may maintain, in addition to a transfer office in New York, similar offices in other cities, but (according to the New York Stock Exchange rules), certificates transferred in the other cities must be identical in color and form and interchangeable with certificates registered in New York.

Another regulation enforced by the New York Stock Exchange, as protection against counterfeiting of listed securities, is that the certificates shall be properly engraved by an approved engraving firm, and that the form, context and quality shall be in accordance with the Exchange's requirements. Considerable controversy has resulted from these restrictions. The City of New York has ceased to list its bonds on the New York Stock Exchange because it refused to have

shares authorized to be issued has been registered, new certificates are not registered except upon cancellation of outstanding certificates for the same number of shares."

the certificates engraved by any of the firms designated by the Exchange officials.

The Guaranty of Investment.—Little progress has been made or is like to be made in insuring the safety of investments through guaranties of financial or insurance companies. When such guaranty is of the nature of insurance, and not endorsement, its cost must be met by investors. The success of mortgage and trust companies with guarantees of real estate mortgages, and the entrance of credit insurance and surety companies in the commercial investment field may lead to further extensions of this class of business undertaking, but as yet no sound actual experience exists, whereby rates can be scientifically computed and charged for relieving investors from the risks of their commitments.⁷ Moreover, as pointed out by Lawrence Chamberlain—"The securities guaranteed must be of high order of safety in themselves, and the guarantor company must have assets far in excess of any probable demand of contingent liabilities."⁸

The business of investment, therefore, may be expected to continue to be one relating to risk and income, and like business in general, the expected gains will be offset by the nature and extent of the risks.

REFERENCES

- CHAMBERLAIN, LAWRENCE. *The Work of the Bond House*. New York, Moody Book Co., 157p.
- GOLDMAN, SAMUEL P. *Stock Exchange Law*. New York, Ronald Press Co., 1923, 497p.
- HUEBNER, S. S. *The Stock Market*. New York, D. Appleton & Co., 1922, 497p.
- MEEKER, J. EDWARD. *The Work of the Stock Exchange*. New York, Ronald Press Co., 1922, 633p.
- TODMAN, FREDERICK S. *Wall Street Accounting*. New York, Ronald Press Co., 1921, 352p.

⁷ Credit insurance, which has developed within recent years in the United States, covers only *undue* losses, setting a maximum which a business man may suffer from bad debts during the period of the contract. It does not, therefore, insure against commercial or business losses. See Ackerman & Neuner, *Credit Insurance*.

⁸ *The Work of the Bond House*, page 105.

Part II—Commercial and Real Estate Loans

CHAPTER XI

COMMERCIAL CREDITS AS INVESTMENTS

The Fundamental Characteristics of Commercial Credits.—Commercial credits, as pointed out in the previous chapter, arise mainly out of commercial transactions. These transactions comprise the production, manufacture, purchase, and sale of commodities. They may also include transactions relating to services, though the production and distribution of goods is at the basis of all genuine commercial credits. It is for this reason that commercial paper, in order to be eligible for rediscount at a Federal Reserve Bank, is required to be based on "existing values," *i.e.*, raw materials, commodities, or merchandisable goods of some sort.

The factors of security back of commercial credits are: (1) the value and marketability of the commodities on which the credit is based, or (2) the credit standing (*i.e.*, net worth) of the maker, drawee or endorser of the obligation, or (3) both these. When the goods or commodities are pledged for the repayment of the credit, the principal basis of the security is the pledged collateral. On the other hand, when there is no special pledge or property securing the obligation, the net worth or credit standing of the maker (obligor) of the commercial credit, or as is frequently the case, the endorsement or guarantee of a second party, gives it value and marketability.

Banking experience for many years has demonstrated that purely commercial loans are the safest of all temporary investments. The "two-name" commercial credit, which comprises both the endorsed promissory note and the trade ac-

ceptance, is the most liquid and satisfactory form. The credit represented by a trade acceptance with two or more names is an indication that the buyer or seller of merchandise is prepared to meet the draft when due. The trade acceptance, therefore, is considered by many the most approved and economical way of transacting business on credit.

Commercial credits, whether in the form of promissory notes (promises to pay) or in the form of drafts (orders to pay) such as trade acceptances, are nothing more than instruments representing deferred payments. They accordingly differ outwardly from capital credits (long-term obligations) in but one important respect, namely, *they are of short duration*.¹ Both kinds of credits, as already pointed out, are fundamentally based on confidence. In commercial credits the duration may be assumed to extend only during the time required to complete the processes of a commercial or productive operation, such as the production of argicultural commodities the manufacture of goods, or the wholesaling or retailing of merchandise.

Classes of Commercial Credit.—From the investment viewpoint, commercial credits may be placed in three classes, *viz.*:

1. Those not available as investments.
2. Those available as investments only to banks and similar institutions.
3. Those available to individual investors.

Commercial Credits Not Available as Investments.—In the United States, a considerable amount of commercial credits come within the first class. Herein are found the “open accounts” or “book credits” of merchants, manufacturers and professional men. Such credits are not represented by written instruments. Accordingly, they are not readily negotiable, and thus lack an essential element of an investment security.

¹ The fundamental difference was stated on page 55.

Moreover "open accounts," "book credits," and "credit balances" bear no interest charge as a reward for deferred payment. Accordingly, the element of a "periodical income" or profit is also absent. Thus, as stated by Chamberlain, they have "no monetary rental value,"² though it is quite probable that a latent interest charge is involved, represented by the "cash discount" allowances usually granted for cash payments, or for payments in advance of the due dates of the indebtedness.

Although "open accounts" (*i.e.*, accounts receivable) are not generally negotiable, and are not available for general investment, they can be sold or "pledged" as security for interest bearing negotiable loans and thus may come within the field of investment. During recent years a number of "finance" companies or "credit" companies have been formed for the purpose of granting loans to merchants, manufacturers and others who as security for such loans sell or pledge the credit balances on their books or other indebtedness due them. These finance companies perform a banking function but their operations only indirectly come within the general investment field.

Operations of Finance or Credit Companies.—In their fundamental characteristics, finance companies date back to the earlier money lenders in the large centers, and to the "factors" which, for fifty years or more, have operated largely in the textile industry. The former were chiefly individuals who advanced funds and took whatever security seemed most satisfactory. "Factors" often combined finance and merchandising by making sales for the mills which used their services, and by advancing funds to the latter for manufacturing operations. These advances are made largely against the manufacturer's bills receivable, which are assigned to the factors. The individual money lender and the factor still remain, though the finance companies whose business has

² *Principles of Bond Investment*, page 38.

been placed upon a more scientific basis is fast displacing them. The finance company has tended more and more to resemble commercial banks in their practices. Their function, however, is somewhat separate and distinct, inasmuch as they supplement rather than displace the services of the commercial banks. There are many business concerns whose resources or credit standing do not measure up to the standards set by ordinary commercial banks. This does not necessarily imply that advances to such concerns when properly secured are not good credit risks. It merely means that insofar as the bank is limited in the nature of its transactions, certain classes of borrowers do not fulfill their usual requirements in extending credits. The latter, accordingly, find the finance companies a credit convenience.

Finance companies, unlike commercial banks, are not restricted legally or otherwise in the kind of commercial paper they may buy or the period of the maturities of loans. Hence, these companies purchase notes and drafts secured by automobiles, pianos, household wares and other goods in actual use, that have been purchased on an instalment plan. Repayment of such advances are generally made over longer periods than ordinary commercial banks allow. The payments, too, may be in small amounts, making it necessary that collections be rigidly watched. Commercial banks find this class of business unprofitable at the usual rates of interest. If they charged more, it would lead to legal difficulties in some cases, and nearly always to dissension among those borrowers who have to pay the higher rate. Finance companies, however, by dealing only with this class of customers, can charge more without making their customers dissatisfied. This increased income enables it to carry the investigation further and to protect itself in making a loan, and also to watch developments after the loan is made.

Finance or credit companies, since they do not receive deposits to be used in making advances, obtain the bulk of

their funds through the issue and sale of their short-term collateral trust notes. The notes have as collateral the commercial paper which they acquire and own. The collateral trust notes are marketed largely among banks and investment institutions, which thereby grant indirectly and through the intermediary of the finance company credit to certain business concerns which they are unable or unwilling to do directly.

Commercial Credits Available as Bank Investments.—

Taken collectively, the commercial banks constitute what is known as the "discount market," which is concerned with the purchase and sale of short-term bills and notes created by commercial, agricultural and industrial concerns to finance current business transactions. Banks of deposit and discount, in granting loans to their clients, either accept in return or purchase (*i.e.*, discount) promissory notes, drafts, or some other written negotiable credit instrument, giving a claim to a future payment. The bank can retain this security or, it may negotiate its sale by "rediscounting" (see page 52). As in the United States such sales of commercial paper are almost exclusively among banks, individual investors play a very small rôle in the operations. However, owing to the encouraging gain since the establishment of the Federal Reserve System of the use of trade and bank acceptances as credit instruments in commercial transactions, opportunities are now afforded individuals as well as banking institutions to invest in short-term commercial credits.

Commercial Loans Available to Investors.—Bankers' and trade acceptances are the chief form of commercial credits available as short-term investments for the general public. Since the establishment of the Federal Reserve System, there has been a steadily broadening market for bankers' acceptances among individual investors.³ Every principal city has acceptance dealers and many of the large banks have established

³ Bankers acceptances were defined on page 53.

acceptance departments where complete service in the creating and the merchandising of acceptances may be secured. There has been also a steady increase in the demand for bankers' acceptances for investment purposes among country banks, savings institutions, corporations, fiduciary institutions, and individuals. As acceptances have become more widely distributed in these channels, the load placed on the federal reserve banks, at the time of their organization in 1914, when they were almost the sole purchasers, has been largely removed. During the first decade of the Federal Reserve System, there has been an estimated turnover of bankers' acceptances of approximately four billion dollars annually, while at the end of 1924 there was outstanding something like one billion of dollars bankers' acceptances. About 85% of this financing represents exports and imports.

The bulk of commercial credits which serve as general investments to the public are created in New York. Just as London occupies a predominant position in the commercial credit market of the British Empire, so New York constitutes the main discount market in the United States. The predominant position of New York becomes apparent if one considers that the acceptances outstanding created by New York banks alone amount to from one-half to two-thirds of all the acceptances outstanding in the United States. New York also at times attracts large amounts of foreign funds from abroad, which are invested either in commercial credits or "call loans." It was estimated that in 1923 about \$500,000,000 of foreign funds were invested in the New York discount market as a result of the heavy "flight of capital" from countries with depreciating currency. This amount has probably decreased since more stable currency conditions have been established on the European continent.

"Open-Market Operations."—Dealings in commercial paper in the so-called open market for promissory notes in the

United States have long been confined chiefly to the sale of single-name promissory notes. Such paper is seldom purchased by other than financial institutions, whereas in Europe many merchants make temporary investment of idle funds in both trade and bankers' acceptances. The "open market" for such investments in European commercial centers affords a medium for ready purchase or sale. It has been authoritatively estimated that the volume of paper revolving and circulating in the open market in London before the World War was normally from \$1,500,000,000 to \$2,000,000,000. The rates that obtain in such markets are ordinarily stable, and for "prime paper" constituting first-class credit risks average somewhat below the bank discount rates. The great commercial advantages accruing to any country that can maintain a stable, open discount market is apparent to every user of credit, as to such a market are attracted not only idle banking funds but also the funds of individual investors. Ample credit facilities is the foundation of business prosperity.

Interest Rates.—The interest rate on commercial loans naturally depends on the idle supply of capital available for such purposes. The tidal gauge of idle funds is the call money rate, *i.e.*, the rate paid for loans that can be called or redeemed at the option of either the borrower or the lender. When the call rate rises sufficiently beyond the rate for short-term loans, holders of liquid funds naturally find it more profitable to invest their funds on call loans than in notes or acceptances. Whenever, on the other hand, the commercial paper rates are higher than the call money rate, institutions and brokers buy readily marketable paper, for by so doing they can make a profit by pledging as collateral their prime acceptances and other commercial paper as security for loans in the call money market. Thus, at the end of 1924, when call rates were low, dealers in commercial paper were reported to have under

pledge as security for call loans with banks about \$75,000,000 of bankers' acceptances.

The call money market also influences the rate on commercial loans in another respect. Most dealers in commercial paper do not operate with their own capital, but borrow up to about 80% of their holdings from banks on call. The margin between the average yield and the average cost of borrowed money is always very narrow. It is clear, therefore, that at a time when the demand for investment in commercial loans is light, an increase in the rate of call money quickly wipes out the profit of the dealer. He, therefore, endeavors to liquidate his commitments at any price that will avoid losses. Acceptance and note dealers, therefore, are willing to expand their purchases in proportion as they feel assured of obtaining an adequate amount of credit at rates which will enable them to earn a profit on their own investment operations.

Savings Banks as Investors in Commercial Loans.—As a general rule, savings banks do not invest in commercial loans. Until within recent years, the mutual savings banks of New York and several other states were prohibited by law from purchasing any form of short-term commercial paper. In order to promote the market for trade and bankers' acceptances following the establishment of the Federal Reserve System, and to afford a wider field for their capital, New York savings banks have been permitted to invest up to 20% of their assets in acceptances. During the period of unusually high money rates following the World War, acceptances found a ready market among savings banks both in New York and other states, the income from such liquid investments equalling or exceeding the rate of return on the highest grade long-term investments.

State savings bank laws, with the exception of Pennsylvania, now generally permit limited investment in secured personal loans. The general tendency of these laws seems to be

first, the setting of conditions which will make for safety, and, secondly, the elimination of the type of loan that is made generally by commercial banks under satisfactory conditions. It is in the province where the "loan shark" has had a virtual monopoly of the field in the lending on purely personal credit that the savings banks may be able to do real service.

Investment on a limited scale in paper bearing the endorsement of persons or organizations other than the borrower has been permitted for a number of years in New England. The qualifications and number of sureties required for eligible notes in the different states, however, vary. In New Hampshire, the note must have two or more signers or one or more endorsers. In Vermont, the paper should bear at least two approved names, either as makers, sureties or endorsers. Such persons, moreover, must be residents of the state, or living within fifty miles of the lending bank. Multiple name paper (*i.e.*, paper endorsed or guaranteed by one or more parties other than the maker) is a permitted savings bank investment in Massachusetts when it is the joint and several obligation of three or more responsible citizens of the commonwealth, but the total liabilities to the banks of persons and corporations borrowing in this way should not exceed one per cent of the deposits. Similar limitations prevail in other states.

Commercial Paper Brokers.—For more than a half-century there have existed in the United States certain firms conducting the business of selling commercial paper on a commission basis to banks and other investors in such credit obligations. These concerns generally handle the promissory notes of well-known business concerns, making offerings of the same throughout the whole country. Frequently, they accompany their offerings with statements showing the financial and credit standing of the makers of the notes. The need for such brokers arises largely from the fact that many business concerns at certain seasons exhaust their lines of credit

with their regular banks, and are thus forced to seek purchasers of their notes elsewhere. At such times many banking institutions, particularly in small towns or in agricultural sections, have idle funds seeking employment. This makes them willing to invest in the loans of business concerns with which they have no direct banking connections. The extent of the brokerage business in commercial paper is indicated by the fact that in January 1920, when a maximum point was reached, twenty-nine brokers reported as outstanding over \$1,230,000,000 of paper which they had marketed. As the average period of maturity of this indebtedness is not over five months, the annual brokerage sales of these brokers approximated \$3,000,000,000.

With the development of mercantile credit information through agencies such as Bradstreet's and Dun's, the broker has become a very considerable factor in distributing investments in short-time commercial paper. The large brokers gather, in addition, credit information of their own from many sources which they collate and disseminate among their customer banks and institutions. The brokers for the protection of their business analyze credit information carefully, since to retain their clientele they must be able to pick the strength and weakness in any individual concern, and place the results honestly before the banks. They recognize, as do investment bankers, that they have a distinct duty to their customers to do all in their power through careful credit investigations, to protect them in the safety of the principal of their investment. They also, as brokers, owe a duty to borrowers to sell their paper at the lowest rate available in the market and according to the best terms obtainable. The broker, as his name signifies, however, acts merely as agent of the borrower. When he discloses the name of his principal before the completion of a transaction, he is not responsible for the repayment of the loans he negotiates.

Agricultural Loans and the Intermediate Credit Banks.—

Agriculture in the United States has been financed in much the same way as other lines of business, but in view of the relatively small size of individual agricultural enterprises in comparison with industrial and commercial corporations, agricultural short-term paper has up to the present been marketed almost exclusively among local banking institutions. Within the last few years, and notably since the agricultural depression of 1920, efforts have been made toward co-operative financing of agriculture and a widening of the market for agricultural short-term credit. To further this movement, Congress enacted the Agricultural Credit Act in March, 1923. This legislation provided for the establishment of twelve intermediate credit banks, to be located in the same cities as the twelve Federal Land Banks, with authority to discount or purchase agricultural short-term obligations from banks, financial institutions or co-operative marketing associations. Advances may be made to co-operative associations directly if the notes or other such obligations representing such loans are amply secured by warehouse receipts covering staple products or by mortgages in live stock.

The methods followed by the intermediate credit banks in financing the co-operative marketing associations of agricultural producers are in general similar to those of commercial banks. The amount advanced in relation to the value of commodities forming the collateral ranges from about 40% to 75%, the maximum fixed by the Act. Warehouse receipts form the principal class of collateral accepted by these banks. The receipts are deposited with an approved custodian, acting in the interest of the creditors. Loans are for periods ranging from three to nine months. Provisions are made for renewals when necessary, but not for purposes of speculation. The legal maximum period of any loan is placed at three years, but the Federal Farm Loan Board has made nine months as the longest acceptable maturity.

The machinery for an elaborate system of examination not only of the intermediate credit banks but of the banks and institutions for which they discount or purchase loans is also provided for. Part of this system of examination is conducted by Farm Loan Board and part of the examination is under the supervision of the Comptroller of the Currency.

The intermediate credit banks are empowered to issue and offer for sale their own notes, under regulations of the Farm Loan Board. These notes are secured generally by all the commercial paper held by the twelve banks and may run for any period not exceeding five years. Although these notes are the obligations of the intermediate credit banks that issued them, all of the intermediate credit banks are liable for the obligations of any one particular bank in the event of default. Most of the notes issued by the federal intermediate credit banks have been for a period of six months only and have been absorbed by the banks throughout the country which have in most instances held them for their own investment.⁴ The same law which established the twelve intermediate credit banks provides also for the creation of national agricultural credit corporations which are privately owned corporations each having a capital of not less than \$250,000. It also provided that national agricultural credit corporations could become rediscount corporations when they have a capitalization of \$1,000,000 or over.

REFERENCES

- BREWSTER, S. F. *Analyzing Credit Risks*. New York, Ronald Press Co., 197p.
- DEWEY, DAVIS R., AND SHUGRUE, MARTIN J. *Banking and Credit*. New York, Ronald Press Co.
- EDWARDS, GEORGE. *International Banking*. New York, Henry Holt & Co., 1924, 495p.
- KEMMERER, E. W. *The A B C of the Federal Reserve System*. 5th Ed., Princeton, N. J., 1922, 213p.

⁴ As of December 31, 1923, the intermediate credit banks have issued and sold \$30,500,000 of their notes.

- MERRICK, ROBERT G. *The Modern Credit Company*. Baltimore, The Norman Remington Co., 1922, 69p.
- STINER, W. B. *Terms of Sale*. New York, D. Appleton & Co., 1923.
- WARD, WILBERT. *American Commercial Credit*. New York, Ronald Press Co., 278p.
- WESTERFIELD, R. B. *Banking Principles and Practice*. New York, Ronald Press Co.
- WILLIS, H. PARKER AND EDWARDS, GEORGE W. *Banking and Business*. New York, Harper & Brothers, 1922, 573p.

CHAPTER XII

REAL ESTATE MORTGAGES

The Real Estate Mortgage Loan.—Loans based on the pledge of land as security is the oldest form of investment. Such loans are said to have existed in ancient Babylon, and they were quite common throughout the Middle Ages, during which time the legal and equitable principles underlying the mortgage developed. On the American Continent, real estate mortgage loans constituted the principal field for the application of capital funds in colonial times, many of the large landholders in early days (some of whom had received land grants direct from the British Crown) having used this means of obtaining funds. The growth of cities, combined with the need of capital for both industrial and agricultural development, furnished a basis throughout the early nineteenth century for increasing the number of mortgages. Today, scarcely any large piece of urban real estate or farm property is without a mortgage. According to the United States Census, 37.2% of the farms were mortgaged, and although no figures are available for urban property, there is reason for believing that the percentage carrying mortgages is very much greater. There hardly exists a large structure in any city or town that does not carry a first mortgage of from 40% to 75% of the value of the land and building. The ease in obtaining such loans, combined with the general stability of land values in a growing and progressive commonwealth, is largely responsible for this condition.

Fundamental Characteristics of Real Estate Loans.—From an investment viewpoint, real estate loans differ from commercial credits in two important particulars, *viz.*: (1) the nature of the collateral, and (2) the maturity of the loan.

THE NATURE OF THE COLLATERAL.—Land and the structures thereon are known in law as “realty” and in accounting as “fixed assets.” The distinguishing characteristic is fixity and durability as contrasted with the “movable” or “consumable” nature of other forms of physical property, which are designated in law as “chattels.” Land, accordingly, is readily identified. It cannot be hidden or carried away, and is not subject to decay or pronounced physical alteration. Moreover, it has a universal usefulness that creates a basis of permanent value. For these reasons it has a relative stability of value, affording a basis for safety of principal. Its manifold usefulness, at the same time, places it within the economic concept of “capital,” since it is or can be made productive. It thus furnishes a basis for security of income. This income is commonly called “rent.” Altogether, therefore, land forms an ideal foundation for “capital credit,” the characteristics of which have been already pointed out.

THE MATURITY OF THE LOAN.—Since real estate is of a permanent and fixed nature, and is universally desired, loans based on real estate security need have no limitation as to maturity. Such loans may run for five months, five years or five hundred years. The existence of perpetual leases of real estate, where the owner receives periodical income in return for giving possession of the property to another, is analogous to a real estate loan. These leases indicate that a maturity date is not essential in securing safety of income or of principal. The duration of real estate investments, accordingly, varies greatly. Real estate mortgage loans are granted for short periods such as one year or less, or for from fifty to one hundred years. Prevailing credit conditions or economic and industrial contingencies rather than the durable character of the collateral are the determining factors in the maturity of real estate loans.

Elements of Real Estate Value.—Value in real estate is primarily determined by the capitalization of its present or

prospective net income. By this is meant that if the net income is a fixed sum, say \$1,000 per year, and the rate of return on durable investment is 5% annually then the value would be twenty times the net income, or \$20,000. If the rate of return on investment is 4% instead of 5%, then the value would be twenty-five times the net income, or \$25,000. In the case of city real estate, the causes which promote the growth of cities in certain locations creates a demand in these locations for sites on which to live and transact business. Such advantages in location are paid for in the form of periodical rent. As long as there will be actual or probable income from this source, the real estate will have value. Lands used for agricultural purposes obtain their values because of the productivity of the soil or the economic advantages of location with respect to markets or transportation. A part of the profits derived by the user of the soil may be ascribed to its differential advantages over other lands. The income from these differential advantages is technically known as "economic rent" or "pure rent." When capitalized on the basis of its annual amount, it gives value to the land. As long as soil is capable of paying "rent," therefore, agricultural land values will continue to have value.¹

An inquiry into the basis of real estate values leads first to consideration of the land element. Land that is useful derives its value not only from its differential advantages referred to above, but from its monopolistic character, *i.e.*, its non-duplicability as a place where, for some reason, people want to live or carry on an occupation. This monopolistic quality in land may be very slight in places remote from population centers. It is more pronounced in residential sections and is greatest on sites suitable for merchandising, manufacturing or shipping

¹ The nature of land rent has been discussed for two centuries by economists. The results of their studies have led to the generally accepted theory that pure rent is derived solely from differential advantages possessed by certain pieces of land over others.

facilities. As a rule, the highest valued parcels of land are those most favorable for retail business purposes.

Land values at the center of growing cities tend to increase but values in intermediate sections usually remain fixed or increase at a lower rate than the increase in population. In such locations land values may even decrease because of changes in the character or drift of the population. Certain favorable factors such as proximity to transportation lines, bridges, railroad terminals, and thickly settled residential sites may operate in creating higher values of individual plots, whereas other factors, such as the presence of factories, garages, school houses, boarding houses or public nuisances may depreciate values. A further element of real estate value in addition to mere location is the cost, character and condition of the permanent structures and other improvements. Successful real estate investment requires a consideration of the fundamental characteristics of buildings and other improvements erected on land. These depreciate from the moment of their completion whereas land may or may not change in value. An increase in land values may be offset by a certain amount of depreciation of buildings, etc., but a decrease has no similar offset. Accordingly, for improved real estate to appreciate in value, the increase in land value should outrun the depreciation in the structures.

A factor equally influential with depreciation on realty values is the suitability of the structures erected on a given piece of land for its most profitable use. A residence on a retail business street or in a factory area would not be the most economical structure for the place. Moreover, each parcel of land to yield its maximum return should contain a type of structure adapted for the most profitable usage for the site on which it stands. Mortgages on edifices suitable for one purpose only are in many cases scrupulously avoided by shrewd investors, as changes in the character of the neighborhood may render these structures useless for profitable purposes.

The Legal Aspect of Mortgages.—The legal history of the real estate mortgage, as already pointed out, dates back to Roman times. It underwent a broad development both on the European Continent and in Great Britain during the Middle Ages and emerged through numerous legal precedents and judicial decisions in a form adaptable to modern investment requirements. The term "mortgage" is derived from the Latin words "mortuus," meaning dead, and "gage," meaning a pledge. The derivation has no significance today, except as a reminder that under Roman and English law estates held under pledge were of two kinds: the *vivum radium* or living pledge, and the *vivum mortium* or "dead pledge," whereby the borrower had the privilege on a certain day mentioned in the deed to repay the borrowed sum and thus regain full possession of the pledged property. If the borrowed sum were not paid on the date specified, then the borrower had no right thereafter to reclaim possession of the pledged property. In that event, to him, it would be a "dead" pledge, and hence the derivation of the term "mortgage."

Under the strict common law doctrine of mortgages, the conveyance of an estate by mortgage gave absolute legal title thereto but this ownership could be defeated "by a condition subsequent," *i.e.*, by the performance of some act by the mortgagor, such as the payment of money or the like. If there was a failure in the performance of the required "condition subsequent," or a breach in any respect in terms of the mortgage, the title of the mortgagee (*i.e.*, the holder of the mortgage) to the property became absolute and indefeasible, and the mortgagor (*i.e.*, he who gave the mortgage) lost all right to regain possession. The English courts of equity, through a long series of decisions dating back several centuries, modified the severity of the common law doctrine on the mortgage debtor. Instead of permitting an absolute forfeiture of the property because of failure to redeem the debt on the specified date, the present English civil law (which has been adopted in almost

all the states of the Union) gives the mortgage debtor the right to redemption at any time prior to an actual sale of the property, and in certain cases, during a fixed period thereafter. In other words, the mortgaged property must be "foreclosed" under judicial proceedings, and not until after a public sale is effected does the debtor lose the right or privilege of redeeming his property by repayment of the debt.

It is a common practice for mortgagees to require along with every mortgage deed granted them a "bond" or note, binding the borrower to the payment of the amount of at least the sum advanced, but generally twice as much. In this way, the borrower becomes *personally* responsible for the debt and can be sued for the recovery of the sum, notwithstanding that he has conveyed a mortgage to the lender. Although the "bond" is ostensibly for the purpose of giving added security to the loan, the value of mortgaged property and the character of the pledge is the prime investment consideration.

Real Estate Valuation.—As stated at the beginning of this chapter, the market value of real estate, unlike the market value of commodities or movable goods, is not based on reproductive costs, but on its earning capacity. This earning capacity is represented by the amount of rental paid for the use of the real estate. There are, as shown on the preceding pages, a number of factors determining the rental. The location of the land, the extent and condition of its improvements, its quantity, shape or productive qualities, and the special uses to which it may be reasonably applied, are but a few of the important determining factors. In practice, these elements are frequently considered in relation to the selling price of similar and neighboring land, for the influence of example is undoubtedly great in the fixing of valuation standards. But setting aside the special causes which make real estate valuable, *the measure of the value is the capitalization of the net rental.* Of course, the rental itself, as pointed out above, is condi-

tioned on the land having an immediate or anticipated earning capacity, which, when capitalized at the prevailing interest rate on the soundest long-term investments, is as great or greater than the sum paid therefor. Thus, real estate values are essentially investment values. The method of valuation in both cases is identical.

There is, however, one important feature in the market valuation of real estate that is not generally present in the value of investments represented by credit instruments. Real estate is not a commodity or claim to property, currently interchangeable with other commodities or with claims of the same kind. Each specific parcel is a unit in itself, fixed and non-interchangeable, and in hardly any case identically similar to other parcels. Consequently, applying the term "market value" to real estate is erroneous unless it is assumed to have a peculiar application differing from the common concept.

Urban and Rural Land Values.—The permanent forces underlying real estate valuation differ to some extent in the case of urban and rural lands. In the case of urban real estate, the desirability or adaptability of the location as an area on which to live or transact business is a leading consideration of value. With farm lands, location may be important, but as previously pointed out, the fertility or productiveness of the soil for agricultural or mining purposes plays a leading part. Accordingly, farm lands continue to have value only as long as they yield income in agricultural use, and mineral lands are valuable only to the extent that they can be profitably mined. Urban real estate mortgages, therefore, occupy an almost distinct field of investment from farm mortgages. The purchase of urban real estate or the securities based on urban land values is not the purchase of simple land areas, but the acquisition of rights incidental to advantageous location in towns and cities. A unit system of valuation based on extent of area is, therefore, not readily applicable to urban real es-

tate, as in the case of farm lands. Moreover, mathematical formulas for the valuation of city lots, factory or residential sites have been found impracticable and unadaptable to general and widespread use.

Systems of Urban Real Estate Valuation.—In the estimate of urban real estate values for taxation and transfer purposes, various schemes of valuation have been formulated. These systems aim to establish as a basis of value a standard lot or land parcel of fixed dimensions and of definite situs in each zone or district. A standard lot, for example, may be assumed to be 25 by 100 feet and occupying a relatively fixed location with reference to the block or zone wherein it is situated. The value of lots or parcels which vary from these standard dimensions or which have more or less advantage with respect to shape and to location within the block are computed in percentages of the value of the standard lot. The range of values is made to conform to a graduated scale. The Somers system as originally applied in Cleveland, Ohio, had the basic unit of 1-foot frontage and 100-feet depth. The William E. Davis standard lot is 25 by 100 feet. An example of a scale of value for lots varying from the standard (as used in the Somers method) is as follows:

CURVE OF VALUE

Any lot of a foot strip		Unit of Value 1 ft. $\times$ 100 ft. = 100%	
Depth of Lot	Per cent of Unit Value	Depth of Lot	Per Cent of Unit Value
1	3.10	80	90.90
10	25.00	90	95.60
20	41.00	100	100.00
30	54.00	150	115.00
40	64.00	200	122.00
50	72.00	250	126.05
60	79.50	500	137.85
70	85.60	700	142.35

Certain multiples are added to the scale, as illustrated above, to allow for the higher values of "key" lots or corner lots, and adjustments are also made in instances of irregularly shaped lots.

Two serious objections may be advanced against the unit system of realty valuation. The first is that a value must be calculated for the standard lot. This necessitates the application of an "opinion method." Under the so-called Somers system, the assumed value was based on the testimony of local real estate experts. By this application of the "opinion method" a so-called "community valuation" was established. Under the William E. Davis system, the value of the standard lot is computed by the "sales method," *i.e.*, from a computed average of actual transfers in a given locality. In view of the constant change in city realty values, these tests are of little practical utility unless new calculations of the standard lot values are constantly made.

Another defect in the "unit method" of urban realty valuation is that it fails to make allowance for "plottage," *i.e.*, special adaptation of a lot to a specific use. Thus, plottage is the added percentage to aggregate value of two or more contiguous lots held in one ownership and attaches when vacant or when covered by a single structure, or it represents the increased value pertaining to a group of lots by reason of the fact that they admit of more advantageous disposition and use than a single lot. Thus, "plottage" is an important element in the valuation of urban real estate. It has already received recognition in the appraisal of building sites in public condemnation proceedings and in the valuation of property for taxation purposes.

A method of real estate valuation which has gained widespread favor is known as the "sales method." This has been used principally in valuation for taxation purposes where "true value" is sought for assessment purposes. Briefly described, the "sales method" is the systematic collection and

comparison of data relating to real estate transfers for the purpose of estimating the so-called "true market" realty values. It consists of a study of the transfers of neighboring property having characteristics similar to the land whose value is to be determined. Two interpretations of the "sales method" have been commonly employed. In one of these the area and consideration in each sale of similarly situated land is found, and the average unit price (per square foot, per lot, per acre, etc.) is ascertained. This unit price is applied to the lot under investigation.

The other application introduces what is believed to be an additional safeguard, consisting of the use of the average assessed value for taxation purposes of adjacent or similarly situated lands. Accordingly, under this method each sale of real estate is shown under two valuations, (1) the selling price, and (2) the assessed value. An average ratio of selling price to assessed value for all land in a district is then computed, and this ratio is applied to the assessed value of the lot undergoing appraisement. Thus, if a plot is assessed at \$10,000, and the average ratio of assessed value to the actual (sales) value in the district is 60%, the land would be said to have a market value of \$16,666.66. This method, though useful in checking values for real estate taxation purposes, gives little aid in actual realty appraisals as a basis of mortgage security.

A serious criticism of the "sales method" is that it involves a selective or "sampling" process. The validity of sampling depends not only on the fairness with which the samples are selected but also upon the volume of the sampling with reference to the total mass of data under investigation. In other words, the "fairly selected samples" must be sufficient in number to equalize or neutralize individual peculiarities or discrepancies. From investigations thus far made under the "sales method" the inadequacy of the data is frequently apparent. This was pointed out by the Committee on Valuation

of the National Association of Railway Commissioners some years ago. The cause lies not only in the scarcity of deeds showing actual cash consideration, but also in the limitations in the selection of *bona fide* sales. According to Professor T. S. Adams—the well-known tax expert, who is a strong advocate of the “sales method”—a real estate transfer, to pass as a “good sale,” must have the following qualifications: (1) a full title must be passed; (2) the conditions of the sale must not be abnormal (hence, sales to railroads, to municipalities, etc., are not included); (3) the complete or net price should be stated in money or in terms easily and safely convertible into money; (4) the assessment (on which the ratio of sales price to assessment value is based) should apply to precisely the same property as sold.

Obviously, it is difficult to find any considerable portion of actual real estate transfers which are not defective in one or more of these qualifications. Even in instances where no effort is made to conceal the amount of the consideration, the conditions under which sales are made frequently render them abnormal. The courts have defined “market value” as being the fair value as between one who wants to purchase and one who wants to sell, not what could be obtained for the property under peculiar circumstances. Few actual real estate sales are transacted under all the above “fair value” conditions. Indeed, it is rarely that the relative positions of purchaser and vendor in real estate transactions are equally balanced. Accordingly, the use of “sample sales” of similar real estate as a sole basis of appraisal requires considerable caution. It should be checked in all cases by the opinion of real estate experts and by investigation of the actual or prospective net income of the property.

The Valuation of Farm Lands.—As pointed out in a previous paragraph, farm land values are more simply determined than real estate values. Moreover, the value of farm

lands, if the fertility of the soil is properly maintained, is not so much subject to sudden changes in market value through accidental circumstances as city and town property. It is probably for these reasons that scientific methods for the valuing of farm property have not been given much attention. Yet, there is invested in American farm mortgages an aggregate sum estimated between eight and ten billions of dollars, or fully as much as represented by the securities of the states and their municipalities and other political subdivisions. Having this large sum in view, the importance of the application of proper principles to farm land valuation for mortgage purposes becomes apparent.

Many of the considerations already discussed with reference to land valuation in the previous pages applies with full force to appraisement of farm lands, but as the soil of agricultural lands is used for productive purposes and not merely as a *situs*, disparity in values of contiguous and neighboring lands are likely to be more pronounced than in the case of urban realty. Hence, the "unit system" of valuation, except in areas where fertility and productivity, as well as other economic advantages, are generally uniform for all parcels, is not so appropriate.

Briefly, the elements entering into the appraisement of individual parcels of agricultural lands, in the order of their importance, are: soil fertility, location, climate, elevation, contour, accessibility, available transportation facilities, and taxation. Special adaptability of the land to the growth of certain products may be also mentioned, but this factor itself is generally dependent on one or more of those stated above.²

REFERENCES

BABCOCK, FREDERICK MORRISON. *The Appraisal of Real Estate*. New York, Macmillan Co., 1924, 380p.

² Wright, in *Farm Mortgage Financing*, page 193, mentions legislation affecting land as an element. He also stresses the effect of a tariff.

- FISHER, ERNEST MCKINLEY. *Principles of Real Estate Practice*. New York, the Macmillan Co., 1923, 309p.
- KIRCHWEY, GEORGE WASHINGTON. *Kirchwey's Cases on the Law of Mortgages*, 2nd ed., by I. MAURICE WORNSEY. New York, Baker, Voorhis & Co., 1917, 764p.
- LILLY, WILLIAM. *Individual and Corporation Mortgages—A Statement for Layman of Legal Principles*. Chicago, Investment Bankers Assn. of America, 1918, 153p.
- ROBINS, KINGMAN NOTT. *The Farm Mortgage Handbook*. New York, Doubleday, Page & Company, 1916, 241p.
- WRIGHT, IVAN. *Farm Mortgage Financing*. New York, McGraw-Hill Book Co., Inc., 1923, 343p.
- ZANGERLE, JOHN A. *Principles of Real Estate Appraising*. Cleveland, Stanley McMical Publishing Organization, 1924, 358p.

CHAPTER XIII

REAL ESTATE AND FARM LAND LOANS

The Value Margin of the Loan.—In practically all real estate loans the amount advanced with real estate as mortgage security is considerably below the actual or appraised value of the real estate. No fixed margin can be made to apply to all plots or all loan transactions. Many investors or mortgage loan dealers limit the amount of the loans to 50% or less of the value placed upon the mortgaged real estate. In certain cities, where values are considered to have a high degree of permanency, loans are frequently made up to 75% of the appraised value. Savings banks and trustees in New York and other states are limited by law in making loans to 60% of the appraised valuation. These limitations are for the purpose of insuring a margin of safety sufficient to cover certain elements of risk.

Risks.—The chief elements of risk in real estate mortgage investments, as stated by George A. Hurd,¹ are as follows:

1. Errors in judgment in valuing property.
2. The lowering of real estate values by general commercial and financial depressions.
3. Loss of value by changes in the internal structure of cities.
4. Depreciation of buildings.
5. Accumulations of delinquent interest, taxes and costs during foreclosure.
6. Loss of value through disposing of property at forced sale.

¹ "Real Estate Bonds as an Investment Security," published in the *Annals of the American Academy of Political Science*, 1910.

To the foregoing should be added another important element of risk, *viz.*, *increase in taxation rates*.

Errors in judgment in appraising the value of property have already been covered in the preceding chapter so that further discussion is not called for here.

The lowering of real estate values because of commercial or financial depressions, though undoubtedly ever present, is a matter which cannot be foreseen or even predicted with any high degree of certainty. This element of risk, moreover, is confined mainly to long-term mortgage loans, *i.e.*, loans covering from five years or upward. Shrinkages in value of real estate, particularly when due to temporary depression in business, are not of a permanent nature, and with the exception of unusual cases, do not disturb the mortgage security. Moreover, the effect is not uniform on all classes of property, or on the same class of property in different localities. Thus, residence or business property may feel the effect very slightly whereas factory and industrial sites may suffer during financial panics severe diminution in market values.

Property values are also affected differently by changes in the gross rentals. Where the fixed expenses of operating the property are heavy in comparison with the gross income a reduction in rentals may cause serious impairment or elimination of the net income, but where the expenses of maintaining or operating the property are light, the effect on the net return of reduced rentals, though substantial, may not greatly impair the value of the property.

This is readily shown by comparing a modern office building, the fixed expenses of which amount normally to about 50% of gross rentals (these expenses including taxes, insurance, heat, light, elevator service, janitor service, and the like) with a loft building of moderate height on which the owner bears no expenses except taxes and insurance. If we assume a drop of 30% in gross rentals the decrease in the net income of the office building will be 60%, while in a similar

decline in the net income of the loft or factory building, the fixed charges of which are but 15%, would amount to only about 35%. Since realty values are based on net rentals, property that is less expensive to operate offers grounds for greater stability, other things being equal, than property which is more expensive to operate. Careful lenders should therefore exercise the utmost caution in loaning on large buildings, particularly hotels and apartments, the expenses of which are heavy.

Reduction in market value through changes in population drift or in the popularity of residence and business sites is a risk which is present in almost all classes of real estate loans. In cities and towns there is an almost constant drift of population toward new or more desirable sections, causing corresponding changes in the location of business and residential areas. In the course of this movement, rental values change, due to the fact that locations which possess the most profitable use become available only for purposes of less profitable use. Thus, retail business sections may be given over to wholesale districts, and the latter in turn, may become desirable only as manufacturing and industrial sites. As regards wholesale and factory districts, the chief danger to be guarded against arises through changes in the location of transportation terminals. The natural tendency of property used for industrial purposes is to place itself between its transportation facilities and the best retail business district, so that it may at the same time be able to handle its goods cheaply and yet be in a location convenient for its customers. Where cities originally developed because of river transportation, the predominance of railroads in later years has in many instances withdrawn business from along river fronts to locations near railroad terminals, resulting in corresponding decreases of property values near the wharves.

Residence property values are affected differently than business property, since social rather than economic factors

dominate in the making of desirable residence locations. However, transportation facilities are frequently as important factors in determining the value of residences as in the case of business or industrial sites. The presence of parks, recreation centers, clubs, hotels, theaters and the like, as well as special advantages for sanitation, science and other conveniences, all play an important part in creating or enhancing real estate values as home sites. As pointed out by Mr. Hurd—"Well developed residence districts at a distance from the center of a city have an element of stability in the fact that they are less likely than those closer to the business center to be injured by the encroachment of nuisances."² However, since the use of land sites for certain business purposes, such as retail stores, may be more profitable (*i.e.*, more income-producing) than for residence purposes, the proximity to a commercial center may result in enhancing rather than depressing values. This is noticeable in the city of New York, where the finest residence streets have been given over to retail stores with resulting higher realty values.

Progressive or rapid depreciation of buildings is an element to be guarded against in many mortgage loans, particularly those extending over periods of years. Losses arising from depreciation vary with different types of structures. In the highest type of fireproof construction, the rate of depreciation due to ordinary wear and tear may be under 1% annually, but may exceed 5% in the case of frame structures. The most serious form of depreciation affecting values, however, is not caused by physical deterioration of structures, but by changes in type of architecture or in construction methods. When the supply of buildings is more than adequate to meet the general demand, tenants naturally select those having the most improved type of construction and possessing the largest number of conveniences. Consequently, obsolete structures or old-

² In the term "nuisances" may be included buildings for every kind of utility except residence, since homogeneity is necessary to the maintenance of value in a residence district. (Hurd, *Real Estate Bonds as an Investment Security*, page 172.)

fashioned types, in order to attract tenants, must be offered at lower rentals. The usual result is a relative loss in market value of this real estate.³

Accumulations of costs during foreclosure proceedings, including the legal period of redemption, may, in some instances, mount to considerable sums. These accumulations comprise accruals of interest and taxes, court costs, fees, commissions and current upkeep costs. These expenses are greatest in the case of small mortgages in states in which foreclosure and redemption laws favor the debtor. Several western states grant mortgagors a considerable period after judgment of foreclosure has been announced by the courts, during which the property may be redeemed by payment of the amount of judgment with interest. This provision is a relic of the British theory of the equitable mortgage, discussed on page 134. The period of grace ranges from nine months in Nebraska to two years in Alabama. Although applying to urban as well as rural property, the primary purpose of the redemption laws in the western states has been to save farmers against the loss of their mortgaged lands by reason of a crop failure or other temporary misfortunes.

The fact that mortgaged property even after foreclosure judgment may be recovered by the owner, either because of a legal period allowed for redemption, or through defect in the foreclosure proceedings, is one of the causes for loss in value of property sold "under the hammer." Foreclosure sales of real estate generally attract so few buyers that it has become a general custom in the United States for mortgagees to "buy in" the properties on which they have judgment of foreclosure. In this way, they are enabled to obtain legal title, so the property may be sold later under more advantageous circumstances than under a forced sale. Only by this means, in many instances, have owners of real estate mortgages been able to

³ Occasionally, buildings become so obsolete as to cause a loss (known as "nuisance value") to the land site.

protect themselves against impairment of principal in foreclosure proceedings.

Effect of Higher Tax Rates.—It has already been shown in previous pages that investments subject to taxation deprives the investment of the desirable element, "safety of income." The safety of principal may be also impaired because the market value of investments, like the value of real estate, is determined by the capitalization of the periodical net income to be derived therefrom. The effect of the tax in altering values is particularly marked when the changes in the rate are not generally applied. In other words, real estate subjected to higher tax rates in one city as compared with another, or in one district compared with another, other things being equal, will have lower market values than where the tax rate is lower. Theoretically it may be assumed that every real estate purchaser discounts future taxes, *at the established rate* in the price he pays for the land. Accordingly, should the tax assessment be increased for any reason except because of corresponding advance in the value of the land, the market value will be lower in proportion to the capitalized value of the tax. Thus, if the gross rental from a piece of real estate which cost \$10,000 is \$1,500, or 15% annually, of which the taxes consumed \$500, or 5%, an increase in the tax to \$1,000 annually, if not compensated by increased rentals, would mean a lowering of the value of the property to \$5,000. The net rental of \$1,000 annually (exclusive of the tax) with the value at \$10,000, would indicate that the capitalized value was on the basis of 10% income per annum. To retain this rate of income with the tax doubled, *i.e.*, increased from \$500 to \$1,000 annually, would mean a value to the taxed property of but \$5,000, since the net income to the purchaser or owner would be but \$500.

The Marketing of Real Estate Mortgages.—Real estate mortgages, unlike most commercial paper, are not negotiable

instruments. Hence, there are limitations on their marketable qualities which do not apply to the general run of business obligations. Moreover, each separate real estate mortgage has an individuality that does not make them interchangeable units. They differ individually as to property security, as to amount (denomination) and maturity date. It is for these reasons that the marketing of real estate mortgages has been, and still is, in a large measure, a matter of local and individual transactions, where the parties to the transactions are known to each other. In this respect, the negotiation of real estate mortgages is essentially the same as the purchase or sale of real estate. In both cases, the passing of title to the property requires a legal acknowledgment, which must be filed for public record. In addition, specific arrangements are required in each individual negotiation covering matters of assignment of insurance, repairs and maintenance, payment of taxes and the like. All these matters have stamped real estate mortgages as investments lacking the quality of ready marketability.

In order to overcome the investment disadvantages arising from lack of "liquidity" ⁴ or marketability, there have arisen in recent years large real estate mortgage and trust companies which lend money on bond and mortgage on one or more individual parcels of property and issue their certificates secured by ownership of the mortgages, thus giving the holders of the "participation certificates" an equity in the mortgage proportionately as the amount of the certificates held bears to the amount of the mortgages securing the certificates. In other words, a mortgage company, let us assume, lends \$50,000 on property, and after depositing the mortgage and other papers in a trust company (or in the trust department of the mortgage company, if such exists) it will sell to investors certificates representing shares in the mortgage to the amount of their respective purchases. In some cases, the mortgage company

⁴ Liquidity is a term now commonly used to indicate any asset or commodity that can be immediately or within a reasonable time converted into cash by sale or redemption.

guarantees the payment of interest and principal. In return for the guaranty, the mortgage company usually charges a premium, represented by a certain income for themselves. For example, if the company receives 6% annually on the mortgage, they sell the certificates to investors at a price that will yield them an income return of $5\frac{1}{2}\%$, taking the remaining $\frac{1}{2}\%$ as a return for their guaranty and other services they render to the purchaser of the certificates. These certificates, when bearing a guaranty, are commonly known as real estate bonds, though the term "real estate" attached to bonds, as shall be pointed out later, is also applied to the obligations of banks or concerns which deal in real estate or real estate mortgages. These bonds, in some instances, are not a direct or collateral lien on specific parcels of real estate.

Real estate participation certificates, in addition to their better marketability, have another important investment advantage over the individual mortgage. A single real estate mortgage can be for any amount, say, from \$100, to \$10,000,000 or more. There may be relatively few individuals that would be willing or able to furnish funds equal to the exact amount of the mortgage. The mortgage companies, however, in taking over a single large mortgage, can issue participation certificates against such mortgage in round amounts, such as \$100, \$1,000, or \$10,000. They accordingly give to the real estate mortgage the marketable quality of "acceptable denomination," which tends to afford to them a wide distribution among investors. By means of these participation certificates and by the sale of bonds secured by real estate collateral, individual investors are enabled to place their funds in real estate loans,—a form of investment that retains its popularity notwithstanding the broadening of the general investment field during the last quarter century or more.⁵

⁵ Owing to the high income surtaxes imposed by both the federal government and the states many wealthy individuals, who formerly purchased real estate securities have been led away from this investment into others that are exempted from such taxes.

Real Estate Mortgages as Investments for Commercial Banks.—As already pointed out, commercial banks are primarily interested in short-term or commodity credits, and accordingly, are limited in their purchases of real estate mortgages, which are essentially long-term or capital credits. It is largely because of this reason that prior to the passage of the Federal Reserve Act, national banks were not permitted to make loans on real estate security. Although this prohibition could be evaded in various ways, it was nevertheless effective in keeping national banks from the real estate mortgage markets. Several of the states, mostly those in the eastern section of the country, also prohibited commercial banks organized under their respective laws from making real estate loans. Even in such states that permitted commercial banks to invest in real estate mortgages the business, except in the rural districts, was on a restricted scale because of the difficulties in liquidating real estate mortgages held as banking assets.

With the passage of the Federal Reserve Act in 1913, national banks (except those located in central reserve cities) were permitted under certain restrictions to invest in real estate loans. Thus, loans can be made on urban real estate if the maturity does not exceed one year. On farm land loans the period is limited to five years. The aggregate of such investments held by any national bank at any time is not to exceed one-third of its time deposits or one-fourth of its capital and surplus, whichever limit the bank may elect to observe. These limitations prevent the national banks from becoming a factor in the mortgage market. In states or in localities where specialized banking institutions for granting real estate loans, such as savings banks and trust companies, are few or entirely absent, there is strong pressure to have the limitations on national banks removed. Several western states grant almost a free hand to banks in the matter of making real estate loans. In Connecticut also, a state bank may loan on real estate as much as it pleases and regardless of prior liens. The only re-

striction is that set up by the bank's officers. In Minnesota, on the other hand, where the need for real estate loans in rural communities must be far greater and where there are only one-tenth as many savings banks as in Connecticut, a commercial bank can loan on real estate no more than 25% of its capital and surplus regardless of the amount of its deposits. In Pennsylvania, a state bank may loan on first mortgages on real estate up to the total amount of its time deposits plus 25% of its capital and surplus and undivided profits, while in New York, a next door neighbor of Pennsylvania, where business and social conditions are essentially the same, a commercial bank chartered under state law may not lend directly upon real estate at all. In Missouri, a state with widely diversified interests, state commercial banks are permitted to loan as much as they please upon first mortgage security; whereas in Georgia, a state of equally diversified interests, 25% of capital and surplus is the limit, but the commercial banks are distinctly discouraged from making of any such loans. Selecting one more out of many similar contrasts, the State of Wisconsin prohibits any state bank from making loans secured by mortgages on property outside of the state or adjoining states, whereas in Rhode Island the law permits trust companies to loan not exceeding 70% of their savings deposits on real estate security, but provides that not more than 30% of this authorized amount shall be on Rhode Island real estate.

Savings Banks as a Market for Real Estate Mortgages.—

In practically all states of the Union, savings banks, whether corporations or mutual associations, are permitted to invest in real estate mortgages. In several of the eastern states, these institutions constitute the most important purchasers of these investments. The savings banks of New York State alone, December 31, 1924, had 55.28% of their assets in real estate mortgages, and those of Massachusetts and Connecticut, 51.08% and 48.6% respectively. In each of these states, the

real estate mortgage investments of the savings banks are regulated by statute.⁶ In New York the savings banks may invest—

In bonds and mortgages on unincumbered real property situated in this State, to the extent of 60% of the appraised value thereof. Not more than 70% of the whole amount of deposits and guaranty fund shall be so loaned or invested. If the loan is on unimproved and unproductive real property, the amount loaned thereon shall not be more than 40% of its appraised value. No investment in any bonds and mortgages shall be made by any savings bank except upon the report of a committee of its trustees charged with the duty of investigating the same, who shall certify to the value of the premises mortgaged or to be mortgaged, according to their judgment, and such report shall be filed and preserved among the records of the corporation. For the purposes of this subdivision real property on which there is a building in process of construction, which when completed will constitute a permanent improvement, shall be considered improved and productive real property.

Massachusetts has essentially the same savings bank restrictions on investments in real estate loans as New York, but in New Jersey the regulations are slightly different. The savings banks in New Jersey may invest—

In bonds secured by mortgages which shall be a first lien on real estate situate in this State, and worth at least double the amount loaned thereon, but not to exceed 80% of the whole deposits shall be so loaned or invested; but in case the loan is on unimproved or unproductive real estate, the amount loaned thereon shall not be more than 30% of its actual value; and no investment in any bond and mortgage shall be made by any savings bank, except upon the report of a committee of at least three of the managers, and two members of which committee shall certify in writing to the value of the premises mortgaged, or to be mortgaged, according to their best judgment; such report shall be filed and preserved among the records of the bank.

Insurance Companies' Investments in Real Estate Mortgages.—Real estate and farm mortgages have for a number

⁶ As a rule, trust funds may be invested in real estate mortgages that are legal for investment by savings banks.

of years comprised a large part of the investment holdings of insurance companies in the United States. Especially in the case of the large life insurance companies, which are not required to have their investments readily convertible into cash, long-term mortgage loans have proven a safe and, at the same time, a lucrative form of investment. Thus, according to figures published by the Association of Life Insurance Presidents, of \$8,805,015,311 of assets of these companies on December 31, 1924, \$3,343,672,100 or 37.9% were represented by mortgages. Farm land loans form a considerable part of this vast sum, the aggregate of the life insurance companies on December 31, 1923, being estimated at \$1,680,891,000.⁷ Much of this represents direct loans made to land owners, but the bulk has been obtained through the purchase of mortgages from banks, brokers and loan companies. Trust companies, many of which do a large real estate loan business, hold these investments both for permanent investment and for sale or barter.

National Mortgage Banks.—Although the development of the mortgage trust companies and farm land banks in the United States is comparatively recent, institutions of a similar character have existed in Europe for more than a century. The first modern mortgage bank, "Die Schlesische Landschaft," was formed by the land owning nobles of the Province of Silesia in Germany in 1770, through the financial assistance of Frederick the Great. This institution, like many since created, was a mutual association of borrowers and lenders, but in course of time corporations or joint stock companies were also organized to conduct the mortgage loan business both in Europe and in the United States. A still further development has been the establishment of large central mortgage banks in many of the leading countries conducted as government enterprises or under government auspices. It is these

⁷ These figures comprise the aggregate of 52 life insurance companies whose assets represent 93% of the total in the United States.

banks which furnished the plan of organization for our own Federal Farm Loan System. The leading European and South American mortgage banks, however, unlike the federal farm loan banks, are not limited in their operations to agricultural loans. They make loans on urban as well as rural real estate.

The "*Credit Foncier*" (mortgage bank) of France, founded in 1852, is the largest and best known of national mortgage banks. It was originally founded to remedy an agricultural crisis in France, so that its first operations were restricted to farm loans. Later activities, however, extended to loans on urban real estate, and to the purchase of municipal obligations created for public improvements. Of total loans aggregating \$2,321,000,000 in the period between 1853 and 1914, 47% was on urban property and 41% went directly to municipalities. Thus, only 12% of the amount went into agricultural loans.

The capital of the *Credit Foncier* is obtained chiefly through public sale of its obligations. These usually bear a lower interest rate than charged borrowers by the bank. The bonds of the *Credit Foncier* are among the most popular investments of the French people. They are chiefly issued in series, and are payable by periodical drawings. Most of the issues have a lottery feature. Several are specifically secured by pledged mortgages to an amount not less than the principal amount of the bank's bonds.

National mortgage banks similar to the *Credit Foncier* have existed for some time in the Scandinavian countries, in Spain, Argentina, Uruguay, Brazil, Chile, Cuba and in Japan. In Argentina, the government conducts the bank and guarantees the payment of interest and principal on its obligations known as "*cedulas*." These, together with the *cedulas* of the Mortgages Bank of Chile, have been marketed in the leading European countries. Norway also has a government owned mortgage bank, a part of whose obligations bear a govern-

ment guaranty of interest and principal. The obligations of the national mortgage banks in Europe and other countries should be distinguished from similar securities issued by private mutual associations or joint stock banks which also invest in urban and rural land mortgages.

The Federal Farm Loan System.—With the establishment of the federal farm land banks by the Federal Farm Loan Act in 1916 investment securities based upon rural mortgages have been developed as an improvement over individual farm mortgage loans. The Act provided for two classes of mortgage banks: (1) the twelve regional federal farm loan banks, each restricted in its operations to designated territory, and organized on a plan similar to the federal reserve banks, and (2) private or joint stock banks each operating in not more than two contiguous states. The federal farm loan banks do not deal directly with borrowers, but with their respective local mutual farm land associations which, under the terms of the Act, become shareholders of the federal land banks in proportion to the amount of their borrowings. The farm loan associations are comprised of groups of local borrowers. They are granted charters by the Federal Farm Loan Board (the government agency which supervises the Federal Farm Loan System) on the recommendation of the federal bank operating in the territory in which the association is located. Loans granted to the associations also must be approved by the Federal Farm Loan Board, and must be secured by approved mortgages on farms located within the section allotted to the association. In borrowing through a farm loan association, the farmer subscribes simultaneously for stock in the association. The association, in turn, subscribes for an equal amount of the federal land bank stock. The value of a share of capital stock of each association is \$5, but the holders are additionally liable to the par amount of his shares, "equally and ratably, and not one for another, for all contracts, debts and engagements

of the association." As the subscription to the stock amounts to 5% of the loan, each \$100 of loans granted adds \$5 to the capital of the local association and to the farm land bank. The federal land bank pays dividends on its shares held by the local associations, who in turn may distribute the amount ratably to its members. When a member's loan is paid off, the face value of his shares is paid over to him and he ceases to be a member of the association, if there are no other loans against him outstanding.

The Joint-Stock Land Banks.—To avoid objection to the "mutual" idea and the "red tape" involved in borrowing from the federal land banks Congress was led to make provision in the Federal Farm Loan Act for joint-stock land banks. These banks are authorized to lend directly to farmers under the same regulations as imposed on the federal land banks. Like the latter, they are under the jurisdiction and control of the Federal Farm Loan Board, from whom they receive their charters. They are, however, operated for profit and not for the mutual benefit of the borrowers.

Both the joint-stock banks and the federal land banks issue obligations secured in equal amount by pledge of their mortgages. In both cases the collateral is deposited with the Federal Farm Loan Board, which first approves such collateral and also authenticates the banks' own obligations. Each of the twelve federal land banks is jointly responsible with the others for the payment of principal and interest of the outstanding obligations of any one of their number, but the liability of the joint-stock bank bonds is individual, as each of these operates independently of the others.

The joint-stock land banks, like the federal land banks, cannot lend more than 50% of the appraised value of the mortgaged land, and not more than 20% of the permanent improvements. The rate of interest charged borrowers cannot exceed more than 1% the rate on the bonds currently issued by the

banks, but in no case can the rate on mortgage loans exceed 6%. This means that the maximum interest rate on joint-stock and federal land bank bonds is 5%. Loans made by the banks are repayable by amortization, that is, the principal is payable in instalments along with the accrued interest. The bonds of the banks, however, have a fixed maturity date, with an optional date of redemption before maturity. They are issued to mature in thirty years, but may be recalled and re-funded after five years from issue date.

The bonds of the federal farm loan and the joint-stock land banks are not analogous to the participation certificates issued by trust companies and discussed on page 149. Although secured by mortgages, they are not mortgage bonds, since the owners of the bonds have no specific lien on single parcels of real estate. Their claim is upon the assets of the banks, of which the mortgages held have been segregated and deposited in trust for their benefit. As stated above, the mortgages are held by a custodian, under the auspices of the Federal Farm Loan Board at Washington, which issues and authenticates the bonds of both the federal farm loan and the joint-stock banks. The bonds are accordingly regarded as "instrumentalities of the United States," and, as such, are exempt from state and local taxes. They have been exempted from federal income taxes by Act of Congress, and the exemption upheld as constitutional by the United States Supreme Court.

Conclusion as to Mortgages.—No one can gainsay the popularity of the mortgage as an investment. It has stood the test of ages. Its value and safety are traditional. For hundreds of years, the best and most popular local investment has been real estate and the mortgages thereon. The legal development of the mortgage is one of the interesting features of English law. The insurance companies for more than a century have favored this type of investment. The great

mutual savings banks of this country depend upon them to keep their earnings balanced. The laws regulating the investment of savings deposits are an indication of the public confidence reposed in mortgages as a class of safe investments, and, as a result, approximately one-half of the savings banks deposits in the United States are invested in real estate mortgages. The popularity of real estate mortgages as investments, however, should not cause a lack of caution or a reckless purchase of such securities. Mortgages vary in quality and in kind like other types of investment offerings. There are very real dangers and a high element of risk in the disreputable grades of real estate mortgages and particularly the so-called "participation certificates" that are marketed with large profit by concerns of questionable character and financial standing. Instances of gigantic failures of such concerns, with serious losses to many small investors are not lacking. More than a decade ago, the American Real Estate Company floundered after having distributed its obligations widely throughout the land, and more recently the Cleveland Discount Company, a concern of similar type went into bankruptcy, leaving little equity in assets to its bondholders.

REFERENCES

(In addition to titles in previous chapter)

- WIPRUD, A. CLARENCE. *The Federal Farm Loan System in Operation*. New York, Harper & Brothers, 1921, 280p.

Part III—Civil Loans

CHAPTER XIV

NATIONAL GOVERNMENT BONDS

LEGAL AND ECONOMIC CONSIDERATIONS

Classes of Government Obligations.—In the preceding pages it was pointed out that from the standpoint of the character of the debtor there are two general classes of investment bonds; one consisting of government bonds and the securities of political subdivisions, which are known as civil loans, and the other consisting of the bonds of business organizations. Before considering the principal and largest class of civil loans, namely, national government bonds, it is proposed here to discuss briefly a general classification of civil loans, as outlined in Figure 2.

Government obligations may be classified into two categories: (1) those issued by sovereign powers, and (2) those issued by political subdivisions or agencies of sovereign powers.

A sovereign power is usually defined as a government which is not subject to, nor recognizes, a higher governmental authority. In the words of Professor Willoughby, it "is the judge of its own competence."¹ For this reason, sovereignty is regarded as indivisible and absolute. A logical deduction from this definition is that a sovereign power, without its own consent, submits to no authority, except by force. It therefore, without its own consent, cannot be sued "*in personam*," although suits "*in rem*" (i.e., against property) may be permitted against a government in a court not subject to its sovereignty. Thus, a suit may be brought in a United

¹ W. W. Willoughby, *The Nature of the State*.

States court against a foreign government, but a judgment of the court can only apply to attachments against property within the jurisdiction of the court. It will not extend to persons or property in a foreign jurisdiction.

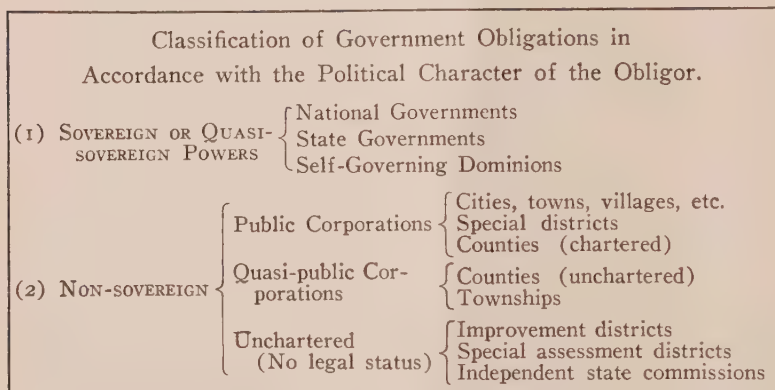


FIGURE 2.

Since sovereignty is indivisible, and a sovereign or national government cannot be sued in courts created by itself without its own consent, the credit of sovereign nations is fundamentally and exclusively based upon faith. In other words, national credit is founded on confidence in the integrity of the debtor government. If there are exceptions to this rule, it is because there exists in connection with the creation and enforcement of the obligation, a condition impairing sovereignty, such as the availability of military force or the physical control of assets or revenues of the debtor nation by the creditors. Customs lien bonds, like those of China, San Domingo and Greece, come within the class of national government obligations, wherein the debtor voluntarily or otherwise submits to an impairment of its sovereignty for the better security of its creditors.

Quasi-Sovereign Government Obligations.—Although as a fundamental principle sovereignty is absolute and indivisible,

non-sovereign political organizations exist, which in relation to the creation and enforcement of their obligations, place themselves in the class of sovereign powers. Foremost among these are the states of the American Union. The credit position of these will be fully set forth in the next chapter. The dominions of the British Empire, such as Canada and its provinces, the Dutch East Indies, the free cities of Germany, the federal states of Brazil and of other small American republics, are further examples. There should also be placed in the same category the governments of the Philippines and of Porto Rico ² as well as the "organized territories of the United States." The obligations of all of these are not enforceable by judicial action unless provision is made therefor by the action of the debtor governments themselves or of the sovereign powers controlling them.

Local or Non-Sovereign Government Obligations.—The direct obligations of political and territorial subdivisions, included within a nation, with the exception of the classes enumerated above, are generally enforceable by legal process in the courts. This is almost universally true in countries where administrative governmental units such as provinces, cities or special territorial districts, are "chartered" or otherwise given a corporate status. As corporations, they can sue and be sued. As corporations, also, they exercise only limited powers, and are subject to the sovereign authority creating them. In American law they are, as already pointed out on page 67, defined as public corporations. In Great Britain, they are commonly known as corporations, in contrast with chartered business organizations designated as "companies."

Indirect Obligations.—In addition to the classes of civil loans already discussed, there are outstanding in the United States bonds or certificates of indebtedness known as *indirect*

² The political status of the Philippines and Porto Rico is defined by the United States Supreme Court in the so-called insular cases.

obligations. These represent the indebtedness of unincorporated districts or organizations created by states or municipalities, usually for the purpose of financing a public improvement. As the maker of such an obligation is not a legal entity and has no judicial status, and as the public authority under whose auspices the obligations are issued does not assume their liability, the securities have a very limited market as investments. Their value is based upon a quasi-tax lien on property that benefits directly from improvements made with the principal of the debt incurred. They are, accordingly, known as "special assessment" bonds, though not all bonds secured by unpaid special assessments on property are indirect obligations of states or municipalities. This subject will be more fully discussed in the chapter on municipal bonds.

Distinctive Features of National Government Bonds.—

Returning to the subject of national government bonds, the important and distinctive features of these obligations are summarized below :

1. As a sovereign nation cannot be sued, the security of government bonds is based on the ability and the willingness of the debtor to repay, unless another nation intervenes in behalf of its own nationals and enforces payment by "warship" or unless the creditors control property or revenues to offset their claims.
2. Government bonds are backed by the taxable resources of the debtor nation, it being presumed that the government has unlimited taxing power and is able to appropriate any portion of the resources within its territory for the payment of interest and principal on its debt.
3. A sovereign national government can borrow for any purpose, whether productive or non-productive. There is, as a rule, no question of *ultra vires*, i.e. of its exceeding powers conferred upon it by some higher authority.

Government Debt Repudiation.—The first point cannot

be emphasized too strongly. National credit, it should be repeated, is based entirely on confidence. As already pointed out, there are generally no legal means of forcing a national government to repay, since it cannot be sued. Unless some special, extra-legal means are taken to enforce payment, such as physical force or the pledging of property, non-payment and repudiation of the debt mean an irrecoverable loss to the investor. Instances of national debt repudiation are not uncommon. A number of South and Central American republics, together with older nations as Greece and China have become bankrupt and have failed at times to meet their debt obligations. Recent instances of debt repudiation are not lacking, notably, those of Russia and Mexico. Our own country is not free from the stigma. Some of the states have dishonored their obligations, taking advantage of the Eleventh Amendment to the Constitution under which they cannot be sued by individuals. In the next chapter, however, it will be shown that, even though sovereign, some states of the Union were indirectly forced by federal and state court decisions to meet their obligations.

In the case of corporation securities, as is well known, enforcement of the loan contract is commonly in the power of the courts. Thus, a holder of the bonds or his representative can apply to the courts to levy on or attach the property of the corporation to obtain payment of interest and principal. On the other hand, the property or resources of a sovereign are not, except under special conditions, subject to seizure. There have been a number of instances of the use of physical force by foreign bondholders to obtain payment, particularly in the case of small countries failing to meet their obligations. This "enforcement by warship," however, seems now to be a matter of history. The last case of importance when this means of collection was attempted was when Great Britain threatened to land soldiers in Nicaragua and seize the customs houses to enforce the payment of a debt due her subjects, and

was only stopped by the protest of the United States that such action would be in violation of the Monroe Doctrine. San Domingo is another case in point. In this instance, the United States adopted the policy of acting as trustee for the purpose of satisfying the foreign bondholders of the little West Indian republic.

Taxing Power.—Another distinction between government and corporation bonds is that the former are based on the government's taxing power, whereas corporation bonds are based on the earning power of the issuing corporations. In levying taxes the government seeks to obtain only sufficient revenues to meet its current requirements. A business corporation, however, aims to obtain as much profit as possible and to accumulate a surplus over and above the amount required to meet current expenditures and maturing obligations. A sovereign nation theoretically has the power to appropriate all the resources of its citizens within its territory. In medieval times the idea prevailed that the king owned all the property within his kingdom, which was merely entrusted to his subjects for his benefit, and that he could, therefore, levy taxes to the extent he saw fit. The modern concept of sovereignty, according to political scientists and the United States Supreme Court, still upholds this doctrine.

In the United States the Supreme Court has held that the taxing power of the federal government is complete in so far as no direct limitations are placed upon it by the Constitution. The revenues of a government are determined by the extent of the national resources. But if it attempts to collect taxes beyond the resources and annual income of the nation, it may do serious economic injury. How far it is feasible to tax citizens for governmental purposes is a question of public finance which need not be discussed at this point. (See pages 223-224.)

Purpose of Borrowing.—A national government can borrow for any purpose, and in this respect also does it differ from a corporation. It may borrow for a destructive purpose, as to make war, or for a productive purpose, as to build canals, railroads, irrigation systems, etc. That it should be able to issue bonds thus for either productive or unproductive purposes is an important matter from an investment viewpoint. It is quite as essential for an investor to know the object for which a government borrows money as it is to know the object for which a railroad or industrial borrows money. For example, if a government borrows for purely non-productive purposes, as the building of museums and theaters, the securities will not be held in as high esteem as they would if their proceeds had been used in building a canal, or improving a drainage district, or for some other productive purpose.

Productive improvements may bring in a return to the government sufficient to pay interest and the principal of its indebtedness and therefore bring no additional tax burden upon the people. The same fundamental principles are involved in government borrowing as in corporate financing. The investment merits of the securities of governments and industrial organizations are alike determined by the purposes for which the money is borrowed, the method followed in using it, and the general credit standing of the debtor.

Public and Private Credit.—In spite of the fact that an individual cannot force a sovereign state to pay its debts, governments, as a rule, have a higher credit standing, particularly among their own citizens, than private individuals and corporations. On that account they can borrow ordinarily and under normal conditions within their own territory at a lower interest rate than corporations. Exceptions to this statement may be noted in the case of unstable or revolutionary governments, or threatened repudiation. Notwithstanding the present enormous debts of national governments, their

securities sell, as a rule, at lower interest rates than the securities of business corporations within their own boundaries.

Government borrowing rates directly affect the interest rates on private borrowing. A private corporation is frequently compelled to meet the competition of government borrowing in its bid for investors' funds. If a government issues bonds at a high interest rate the business corporation must not only meet that rate, but also bid higher. Thus, if it has been the policy of the government to borrow money at $3\frac{1}{2}\%$ when private borrowers are paying 5% for investment funds and in order to obtain a large loan it agrees to pay 5%, business corporations to get desired funds will have to advance their borrowing rates proportionately to meet this increase. The same is true of the volume of borrowing. If the government is a heavy borrower, industrial enterprises are forced to reduce their borrowings. During the last years of the late war private investment in Great Britain and France ceased because of the governments' heavy borrowings. In our own country private borrowing was restricted as a war measure. The Capital Issues Committee, provided for by act of Congress, had power to withhold from public sale new stock and bond issues.

Government borrowing has also an important bearing in the general economic situation. If done on a large scale it leads to currency inflation, which in turn results in increased prices and higher cost of living. People can invest in large amounts of government securities only if they can secure loans from banks against the pledge of the bonds as collateral, and this borrowing gives rise to credit and currency expansion. In time the circulating medium exceeds the requirements of trade and becomes redundant. Practically all the great nations of the world, including our own and some of the former neutral countries, as Holland, Denmark, and Norway, which maintained large armies during the World War and had to increase their indebtedness, have or have had inflated currency to

which increased prices and high wages are to be largely ascribed.

Development of National Indebtedness.—National debts are a comparatively recent development. There is no evidence of the existence of national indebtedness in ancient or early medieval times, even among nations enjoying republican governments. Until modern times governments paid for their ordinary needs and defrayed the costs of conducting wars from current revenues. The sovereigns were then assumed to have the right to levy at pleasure on property within their respective kingdoms, and their taxing power was unlimited. Moreover, they could readily make a profit by clipping or debasing the coinage of their realms. During and following the period of the Crusades, European sovereigns began to borrow largely as individuals directly from wealthy subjects or foreign bankers, but this was done without the public sale or distribution of the claims of the indebtedness.

The first issue of what might be called government bonds was put out by one of the Italian cities in 1171. In that year, as pointed out on page 14, the free city of Venice organized a bank, through which it issued certificates of indebtedness that passed as currency between its citizens and were accepted in payment of debts. Later other countries adopted similar expedients for raising emergency funds. Partly in this way, paper currencies came into widespread use.

Until the period preceding the Napoleonic Wars, public government borrowing was very limited. In France, before the Revolution, whenever the monarch was short of funds, he farmed out to individuals for a lump sum, paid in advance, the right to collect certain future taxes. He thus converted expected tax receipts into funds available in the present. Napoleon, as previous conquerors in history, paid for his wars largely by levies on foreign peoples. The British government went heavily into debt in the wars it waged against him, and

the British people were confirmed in their investment habits by their dealings in this national debt. The beginning of the British national debt, in fact, goes back to a century before the French Revolution. It is commonly known that when the Bank of England was chartered in 1694, the directors were required to subscribe to £1,200,000 of the government debt.³ From such small beginnings the business of government loans grew very rapidly. For two centuries the London Stock Exchange was engaged chiefly in trading in the British government debt. The English banking houses of the Rothschilds and Coutts greatly enhanced their wealth by dealings of this sort.

Peace Debts.—After the Napoleonic era peaceful undertakings as well as war were responsible for the growth of national indebtedness. The nineteenth century was a period of great development and progress in public works, such as railroads, canals, harbors, docks, drainage, and lighting, and national governments borrowed heavily for these improvements. In addition they made tremendous outlays for military and naval purposes. In this way government functions expanded and expenditures grew until they could no longer be met from current revenues. As public improvements, wars and armaments were also for the benefit of future generations, nations did not hesitate to borrow in order to shift a part of the burden from the shoulders of the present generation. Moreover, modern times have been propitious for public borrowing, since capital funds have accumulated rapidly and have sought investment. From the first, government bonds became the most favored security in the whole investment field.

Investment Factors.—It has already been pointed out that in lending to governments the same investment principles govern as in granting loans to business concerns. Not only should the credit standing of the debtor nations be considered,

³ See page 179.

but their resources, the character and size of their populations, and the stability and character of their governments should also be taken into account. Investigation should be made of their outstanding indebtedness and their revenue sources in the same way as a bank makes inquiry into the outstanding indebtedness of a corporation before granting it credit. Thus, in studying the value of government bonds, the size and character of the debt in relation to the country's natural resources and population should be taken into consideration.

It will not suffice to take only one of the factors, resources or population.⁴ Both must be considered. An investigation of the resources without a proper study of the people is of little value when the question of the payment of interest and principal on the indebtedness is concerned. Resources embrace such items as the quality and fertility of the soil, the availability of minerals and other natural wealth, the volume of industry and trade, the excess of exports over imports, and such productive public improvements as railroads, canals, and other aids in the production and distribution of wealth. Similarly, the size and character of the population are very essential investment considerations. Are the people industrious? Do they follow a sound code of business morals? Are they capable of maintaining a stable government? These are but a few of the questions that must be answered when investigating the investment quality of government securities.

When once a country repudiates its debt or otherwise fails to meet its financial obligation, its credit is impaired and it can borrow only with the greatest difficulty. Should the German or Austrian governments repudiate their present domestic and foreign indebtedness, it would be impossible for

⁴ As pointed out by Elisha M. Friedman in his excellent work on *International Finance and its Reorganization*: "In considering the relation of national wealth and war debts, one must make allowance for several sources of error. The figure of national wealth is taken to be the sum of the wealth of the individuals in the country. However, this is not an accurate standard. The wealth of a nation is not fixed. It depends not only upon its natural resources, but also upon its human resources and its economic policy. The wealth of a nation may rise or fall depending upon a change in any of these factors." (Pages 18-19.)

them to borrow either at home or abroad except under the most unusual conditions and with the strongest guarantees and pledges. Mexico could not borrow a cent in the money markets of the world after 1914, when it had ceased paying interest on its national debt. Soviet Russia for a similar reason is in the same predicament.

National Debts and International Trade.—Important factors in national borrowing relate to international trade and finance. Investment in foreign national debts depends to a considerable extent on the international trade relationships a country desires to form. When one nation wishes to obtain an economic foothold in another by increasing its commerce with the latter, its government is likely to favor the investment of funds in the national debt of the other country, just as a manufacturer seeking a market for his products fosters personal relations with certain merchants. The external loans of China and the South American countries have been floated largely in this way. Economic and political considerations induced British bankers to market South American government bonds, and led the German and French governments to encourage investments in the Orient. American banking interests must follow a similar course to expand the nation's foreign trade. It is expected that they will continue advancing funds to foreign governments through bond purchases, and that a broad market for the securities will be established in this country. Not only will American investors then get interest on these foreign debts, but American manufacturers and merchants will make valuable business connections abroad.

Creditor and Debtor Nations.—An important factor in national credit is what is known as "the balance of international payments." Theoretically, each nation, in order to maintain a credit position, must produce sufficient in actual goods ⁵

⁵ Gold, the ultimate means of international debt settlement, is included under "goods."

and services to meet its obligations at home or abroad. If it borrows from abroad either for private or for governmental purpose, it must have present or prospective resources in exportable values (goods or services) to repay the recurring interest charges and ultimately the principal of the obligations. International finance is accordingly concerned with the "international balance sheet," a term coined since the European War, but now in widespread use among economists and financiers. A nation which enjoys commercial intercourse with other nations, unless its aggregate exports of all kinds (money, commodities and services) balance its aggregate imports along the same or different lines, is either a debtor or a creditor on the international balance sheet. If a debtor, it can only change its position by settling the obligations standing against it. On the other hand, if it is a creditor, it is relieved of the necessity of sending abroad in the form of goods or services, a net balance to meet its international settlements, and a portion of its population, in whole or in part, will depend on purchases or claims to values abroad for income. The export or import of capital (goods and services) is the balancing factor in equalizing the items in the international balance sheet.⁶

REFERENCES

- ADAMS, H. C. *Public Debts, an Essay on the Science of Finance*. New York, D. Appleton & Co., 1890, 407p.
- FRIEDMAN, ELISHA M. *International Finance and Reconstruction*. New York, Dutton & Co., 1921, 702p.
- HIRST, F. N. *The Credit of Nations*. Washington, 1910, 213p. (U. S. Senate, 61st Cong., 2nd Sess., Doc. 579.)

⁶ As pointed out by Mr. Kimber in his *Foreign Government Securities*: "The export of capital which benefits both the lender and the borrower most is that in which the capital is represented by goods and services on which the lending country makes a profit, and which also increases the productive power of the borrower. Loans made to provide for the building of railroads or other public utilities, port works, etc., loans to cover reorganization of a country's finances, replacing a wasteful or extravagant system with a sound and economical one, loans to pay for machinery or raw materials needed to rebuild a nation's industrial life—these are profitable to both parties in the transaction. On the other hand, a finance loan pure and simple, unless it operates to correct the exchanges or balance the international account, should be regarded strictly as an investment, the loan being of no other benefit to the lender. Nevertheless, the rule should not be applied too strictly to the individual transaction. The account as a whole should be considered." (Page 21.)

CHAPTER XV

FOREIGN GOVERNMENT BONDS AS INVESTMENTS

United States as a Creditor Nation.—Previous to the World War, the great creditor nations were Great Britain, France, Holland, Belgium and Switzerland. The war turned the tide of the investment stream. For many years prior to the outbreak of hostilities, America was a favorite field for European capital. Europe bought our government bonds, our railroad securities, our mining stocks, our oil stocks and our industrial shares. The amount of capital investment represented in these holdings in 1914 has been variously estimated at between three to six billions of dollars. Whatever the amount, the bulk of it has since been turned back. A large part was made the basis of collateral for the British and French government borrowings in the United States to support and stabilize exchange values and was subsequently liquidated by sale in the New York market.

In addition to the resale of American securities held abroad by foreign investors, a borrowing movement in the United States by the Allies began soon after the outbreak of war to help finance hostilities. The Anglo-French half-billion-dollar loan of 1915 was a new experiment in American finance. It was followed by a number of other European government bond offerings by neutral as well as belligerent nations. The stream was further swollen by the New York borrowing of Latin-American, Australian and other governments. The effect of the momentum gathered by the movement and the probabilities of its continued growth are problems which have puzzled bankers, statesmen and economists, but it has converted the United States from a debtor to a creditor nation.

Comptroller of the Currency Crissinger in 1923 estimated

the amount of dollar securities issued by foreign countries in the United States since the armistice at approximately three billions, in addition to which foreign currency securities of something like \$600,000,000 were sold in this country. Accordingly, the total of such investments in foreign securities amounted approximately to \$4,000,000,000. Although considerable part of this has been refunded or sold back to European investors, new and larger borrowing has since brought the total to probably around six billions of dollars. In the year 1924 alone, foreign issues, largely government securities, approached a billion and a half dollars.

Foreign Government Bonds as Profitable Investments.—

A more important question than the mere volume of American investment in foreign obligations is the basic character of such investments. There is a growing appreciation of the fact that debts to a foreign nation representing money lent abroad for productive or reorganization purposes form the background not only of the lending country's financial but also its industrial position. On the other hand, money lent for war purposes or for meeting deficits in current government expenditures may result in serious loss of capital and a waste of the lender's national economic resources.

Great Britain's experience is an instructive example. In the early part of the nineteenth century, English financiers advanced to Latin-American countries liberal sums which were wasted in carrying on wars or in extravagant government budgets. Several of these loans were defaulted or scaled down through readjustments and loan settlement agreements. In more recent times, loans to South and Central American republics have been restricted to economic and productive uses, such as the construction of railroads, the improvement of harbors, sanitation works and other beneficial and money-making enterprises. In many cases the expenditure was supervised and the enterprises themselves managed directly by British

financiers. These investments have proved mutually profitable both to the borrowing and lending countries not only because of the beneficial character of the investment but also in creating and fostering closer international trade relations.

The Argentine railroads, for example, were built with British capital. Consequently, Great Britain not only has shared in their profitable operation, but for many years the Argentine railroads have served as an outlet for British railroad supplies and British coal. London in the meantime has held its dominant position as a financial center to Argentina largely through the liberal loan and discount facilities granted foreigners. Investments in foreign securities, therefore, serve as a source of national income and to a considerable extent also assist in upbuilding and expanding the international trade of the lending country.

Broadening the Market of Foreign Government Bonds.

The question at this stage of America's position as international banker is whether savings institutions, trustees and other American investors should assist in international trade expansion by being permitted to purchase sound foreign securities. Only a few of the important states of the Union at present permit such investment even on a restricted scale. Connecticut alone of the Eastern States has amended its law so as to permit investment in French, British and Canadian government issues. New York and Massachusetts, the leaders in sound savings bank legislation, have taken no action to encourage investment in good foreign securities. Certainly the time is approaching when savings banks and trustees will require a wider field for the profitable placing of funds. The "legal" group of railroad securities has not expanded in more than a decade, and new offerings of this class of obligations, because of the exhaustion of the prime mortgage possibilities of the leading railroad companies, have become rare. Domestic municipal securities, though largely increased in volume, are

becoming less desirable, not so much because of deterioration of quality through excessive issues, but more so because the yield of these tax-exempt securities is not sufficient to afford a reasonable return on investment to institutions and trustees of moderately sized estates. Only the millionaire group of investors and very large estates find it profitable to invest in them. Sound foreign government securities, then, would seem to be the logical new class of investments for savings banks and trustees. If carefully chosen and purchased under proper restrictions and safeguards, they materially add to investment diversification, a frequently neglected principle underlying modern investment methods.

In the present international situation the United States cannot afford to neglect its opportunities. Since the World War, all European nations are experiencing a scarcity of capital. Accordingly, the Latin-American and Asiatic countries, together with the smaller nations of Europe and the colonial possessions of the leading civilized peoples, are turning to the United States for funds to develop their resources. A remarkable field for investment is thus opened to American investors as one of the results of the abnormal international situation created by the war, and this field should appeal to the natural desire of American capital to seek larger profits abroad.

SOME FOREIGN GOVERNMENT BONDS

British Government Bonds.—The two largest groups of foreign government bonds in the United States are those of Great Britain and her dominions, and the French Government obligations. Both of these great commercial nations, in addition to having a long history and an excellent debt paying record, are among the richest and most advanced politically and financially in the world.

The British government public debt had its origin in the sale of annuities for the purpose of raising funds to meet the heavy war expenditures incurred in the early part of the

eighteenth century. During this period the former method of borrowing by means of mortgaging anticipated revenues and by the issue of exchequer bills became inadequate. The government, therefore, resorted to the system of "funding," as public borrowing was then designated. Though perpetual loans were obtained from the Bank of England, the East India Company, and from the South Sea Company in exchange for charter privileges, the bulk of the borrowing consisted of the public offering of annuities. Under this system, in return for the payment of a definite sum, the government agreed to pay during the lifetime of the purchaser of the annuity, or for a specified period, a fixed periodical sum. In order to popularize this method of raising funds, lottery and gambling or "tontine" features were added. Loans without maturity or "perpetual annuities," as they were first called, were also resorted to at various times by the British government during the first half of the eighteenth century.

In 1749, following the treaty of Aix-la-Chapelle, when the British public debt exceeded £78,000,000, a general refunding and consolidation of various government loans and obligations was effected. This led to the issue of new 3% perpetual bonds which have since been known as "consols." Notwithstanding sinking fund provisions for national debt reduction following the successful refunding operations of 1749 and subsequent thereto, the British public debt at the outbreak of the American Revolution was stated by Adam Smith in "The Wealth of Nations" to have increased to about £125,000,000. It was greatly augmented during the almost continuous period of warfare of the next quarter-century.

The history of the debt of Great Britain is marked by a zigzag upward trend similar to that of the United States. The Napoleonic Wars left the English government burdened with a very heavy debt. The amount declined steadily for about fifty years after the Napoleonic Wars because the

British government followed the policy of redeeming its debt through sinking fund operations and through purchases from surplus revenues. Great Britain has had two wars during the last three decades—the South African War and the recent World War. Both of these conflicts entailed heavy increases in the national debt. The total debt at present amounts to about \$38,000,000,000, figuring the pound sterling at the normal rate. This is more than \$17,000,000,000 in excess of our own government indebtedness.

The British people have long been accustomed to invest in government securities with the result that the national debt has been widely distributed among them. After the Napoleonic Wars when the national debt exceeded \$4,000,000,000 the various issues were gradually consolidated into a single issue, now generally known as "consols." The British Treasury again resumed the policy of buying up its debt through a sinking fund. This action for a number of years steadily increased the market value of British Government securities. The consols have always been active on the British exchanges and largely bought by both institutions and individuals. However, until the outbreak of the World War, when they depreciated greatly in value along with other securities, the income return on them was very low. They were bought only by those who wanted above all other things the security of their principal.

French National Debt.—The early French Government debt was of a similar nature to that of the British. Prior to the French Revolution resort was had to annuities, lotteries, and even to forced contributions. Accurate estimates of the total of these obligations are lacking, but according to the Swiss banker, Necker, the famous finance minister of Louis XVI, the total annual charges amounted to about two hundred and seven million francs, representing a capitalized debt of approximately three and a half billion francs.

In 1793, during the early period of the French Revolution, the national debt was first consolidated. A law was passed by the National Assembly requiring all public creditors to register their names and the annual amounts due them in the Great Book of the Public Debt, and also to exchange their obligations for new perpetual bonds of a uniform character. These perpetual bonds or "*rentes*," which have passed through a series of refundings and consolidations, remained prior to the World War the standard form of French Government obligation.

The national debt of France has been almost constantly increasing, notwithstanding the fact that between 1871 and 1914 the nation had no serious wars. The present debt, including the loans put out since 1914, is in the neighborhood of 300,000,000,000 francs, or almost \$60,000,000,000 at the normal rate of exchange. Since France has a population of a little more than forty millions, this means a per capita debt probably larger than that of any other European nation. But the French are a thrifty people and the natural resources of their country are developed economically by an excellent industrial organization. Moreover, it is expected that a considerable part of the French debt burden will be met from German and Austrian reparation payments.

Prior to the war the bulk of the French Government bonds, known as "*rentes*," were almost exclusively perpetual issues, *i.e.*, they had no maturity date and in some issues not even a redemption provision. This absence of a maturity date and sinking fund is one of the reasons why the French Government debt is relatively the largest of almost all the great European countries. This undoubtedly has contributed to the decline which has taken place in the price of the *rentes* since 1914. The French people, however, are a nation of investors, and they place their own government securities as among the most desirable of their commitments.

Germany.—Germany did not become a European nationality until after the Franco-German War of 1870. Previous to that time, the separate kingdoms and principalities did their borrowing independently. These debts were not assumed by the Empire after its formation, with the result that at the outbreak of the European War, the Imperial German debt was the lowest *per capita* of any of the national debts of the belligerents. However, due both to heavy military expenditure and to the phenomenal growth in wealth and population, the national debt of the German Empire expanded by leaps and bounds. In 1877 it was estimated at 722,000,000 marks, or about 1.66 marks per capita. In 1891 it was 13,178,000,000 marks, or about \$7 per capita. On the event of the war, it approached 48,000,000,000 marks, or something like \$18 per capita.¹ In the same period, the states and municipalities of the empire also enlarged their outstanding debt obligations. Very little if any of the increased government debt in Germany at this time arose from depreciated currency, since German money, like that of Great Britain and France, was on a gold convertible basis. In the course of four years of severe warfare, during which the convertibility of the paper currency was suspended and unlimited issues of bank notes were resorted to, the German national debt grew to enormous figures, keeping pace with that of the rival nationalities, France and Great Britain.

The war financing of Germany, however, had one distinctive feature. It was limited almost exclusively to internal borrowing. This was due to the enforced isolation of the country. Opinions differ as to whether this was or was not advantageous to the German people, but in view of the utter annihilation of the value of German currency following the war, it has had the effect of substantially cancelling the government obligations. Thus, as pointed out in the Dawes Report, the German Empire in the year 1924, begins a career of

¹ See Friedman, *International Finance and Reconstruction*, page 136.

industrial and financial reconstruction without the burden of meeting heavy interest and amortization charges on its national debt. This situation is one of the factors enabling the German government to borrow abroad. Of course, the heavy reparations payments constitute a national burden not unlike outstanding bonds, but there is a disadvantage to investors at home or abroad from this source. Since fluid capital in Germany has become depleted as one of the results of the currency inflation, the German national government and its federated states may be expected in the future to be heavy borrowers in foreign markets, and notably in the United States. In this, they are likely to replace Great Britain, France, Belgium and the European neutral nations, which, because of accumulations of capital funds at home, may no longer find it necessary to seek loans in the American money market.

South American Government Bonds.—In addition to European government bonds, American bankers during and since the late war have lent money directly to South America, Japan and the Dutch East Indies, and have purchased from European holders large blocks of the government bonds of these countries that were originally sold in other markets. These investments, as a whole, have proven relatively profitable. The field is yet a new one. It is bound to grow as the international trade with our neighboring republics expands and as American capital continues to seek larger profits in new and undeveloped countries than can be obtained at home.

As already pointed out, French and British investors were the principal purchasers of the obligations of the Latin-American republics until the outbreak of the European War. The South American Republics, because of their large undeveloped resources, and lack of accumulated capital, are compelled to seek large sums abroad for public improvements and the creation of facilities for modern production and distribution. For more than a half-century prior to the World War, they had

been bidding against our own country for the surplus investment funds of Europe. Now that the leading European nations can no longer spare the capital which formerly was available for foreign investment, the Latin-American nations have turned to their affluent sister republic for financial aid in developing their resources. According to available computations foreign investment in South America in 1917 aggregated several billions. Of this amount, the United States furnished very little, and only a small fraction of this comprised loans to governments. Since 1917, however, Latin-American government securities in New York approaches a half-billion dollars.

Risks of Government Investments.—It cannot be too strongly reiterated that investment in foreign government bonds requires the same cautious and careful considerations as the investment in other classes of securities. Since, as already pointed out, the investors in national government obligations have not the legal protection or the ability to enforce collection that attaches to domestic corporation securities, a double measure of precaution is essential. The welfare of the debtor nation is the best assurance of the safety of the investment, so that it is a false precaution to prescribe onerous terms that handicap economic and social progress. As has been well stated by Professor George W. Edwards:

In granting foreign loans due consideration must be given to the interest of borrower as well as lender. The history of international finance shows that intensive exploitation of a foreign country may be carried to an extreme where neither borrower nor lender benefits. This has occurred in a number of cases in applying capital to the utilization of the superior natural resources of countries new in industrial development. The present problem of capital export is concerned mainly with its relation to cheap labor power, particularly in countries with a mature economic organization, but with an impaired financial condition. These borrowing countries may be so tightly bound by the stipulations contained in the loan agreements that they are practically in a

state of economic serfdom to their creditors. Such relationship does not develop a spirit of willingness to pay and regardless of the technical legal strength of the guarantees for such loans, their payment is imperiled by the very severity of the terms. In fact, all attempts at a too great benefit to the lender are fraught with danger or at least possess but doubtful wisdom.²

It has become the practice for a number of governments, in order to obtain loans abroad, to pledge the proceeds of revenues or property as security for their obligations. Though confined largely to undeveloped countries or national borrowers of weak credit, it is worthy of note that the leading European governments during the war, resorted to this means of securing loans. Thus, the Kingdom of Great Britain 5½% Loan in 1917 was secured by pledge of stocks and bonds, including the obligations of several national governments, which in the aggregate had a nominal market value in excess of the amount of the loan for which they served as collateral. The national loans of China, Greece, South America and those of Germany, Austria and other Central European nations issued since the war have, in most cases, special liens on revenues as security. The effectiveness of this security depends to a considerable extent on the provisions for the collection of the pledged revenues or the safeguarding of the property liens. In some cases, the revenues are collected by the debtor without interference or supervision from agents or representatives of the bondholder. This is the policy followed in connection with Japanese 4½% sterling bonds of 1905, secured by the government's tobacco monopoly. The 8% Loan of the Kingdom of the Croats, Slovenes and the State of San Paulo 8% Bonds are secured in like manner. In other cases, the pledged revenues are collected and the obligations paid by a representative of the bondholders. The Chinese customs secured bonds, which, notwithstanding the chaotic and weak condition of the Chinese national government, have maintained

² See *American Economic Review*, March, 1924, Supplement p. 26.

for years relatively high market values, is an issue of this class. So are the customs secured bonds of Greece. The customs lien bonds of San Domingo and of Haiti are protected, under treaty with the United States, by the administration of the customs by agents appointed through the United States Department of State. The recent flotations in the United States of Germany, Austria, Hungary and Greece are backed by pledges supervised by agents acting under international agreement.³

The working out of these guarantees is a problem of international finance and world politics. They are, at best, merely instrumental in bolstering up impaired credit, and in this respect, resemble receiver certificates issued under court authority by bankrupt corporations. The actual and permanent security back of all national obligations is primarily dependent upon the national economic resources and the capability and willingness of the government authorities to provide the means of payment.

Loan Amortization.—A feature of many foreign government loans is the provision for partial or total repayment of the principal at or before the maturity. The amortization may be accomplished through the accumulation of periodical sinking fund payments, through compulsory purchase or call of bonds at regular intervals or through the application of special revenues or surplus funds for debt redemption purposes. As already pointed out, it is the common practice of many foreign governments to issue bonds without naming the date of maturity, the redemption being provided for gradually through purchases in the open market or by sinking fund and other amortization operations. When sinking fund requirements are severe, they are likely to deplete the national treasury and cause additional borrowing. On the other hand, without debt redemption provision, the national debt tends to become per-

³ The Austrian loan is noteworthy because of its international guaranty under a plan arranged by the League of Nations.

manent, and generally gives little prospect of decrease, since bond maturities (if there are such) can in most cases be met only through refunding. The absence of amortization provisions in connection with the old French government *rentes*, as stated on page 180, is an instance of the prevalence of the idea of permanency of the national debt "as a national blessing."

REFERENCES

- Council of Foreign Bondholders (London) Annual Reports.* London. Issued annually. Contains historical and credit information regarding various national governments.
- FISK, H. E. *Dominion of Canada, The.* New York, Bankers Trust Co., 1920, 241p.
- French Public Finance.* New York, Bankers Trust Company, 1922, 363p.
- HALSEY, FREDERIC M. *Investments in Latin America and British West Indies.* Issued by the U. S. Bureau of Foreign and Domestic Commerce, Washington, D. C., 1918, 544p.
- HOBSON, C. K. *The Export of Capital.* London, Constable & Sons, 1914.
- KIMBER, A. W. *Foreign Government Securities.* New York, A. W. Kimber & Co., 1919, 304p.
- Kimber's Record of Government Debts and Foreign Securities.* edited by A. W. Kimber. (Published annually.)
- Statesmen Year Book.* London, Macmillan & Co. Published annually. Contains statistical and financial data.

CHAPTER XVI

UNITED STATES GOVERNMENT BONDS

Standing of United States Government Bonds.—In the previous chapter, discussion of the United States national debt was purposely avoided in order to permit a separate consideration. The measure of confidence a people have in their government and their country is to a large extent indicated by their attitude toward the national debt. When a nation's credit is ranked higher by its own citizens than any other form of investment, when the prompt payment of national obligations is regarded by them as a national duty, and when material sacrifices of all kinds are gladly endured in order to provide the means of sustaining national freedom and unity, the bonds or other obligations of such a nation are bound to be sought after eagerly in the financial markets of the world. It is a natural sequence, therefore, that United States bonds, even during the periods of darkest calamity, have found their way into the coffers of the shrewdest international financiers, and have justly earned the designation of the *premier security*.

History of the United States Debt.—The public debt of the United States had its origin in the indebtedness incurred in the Revolutionary War. The federal government established under the Constitution in 1789 inherited from the former confederation, a debt of about eighty million dollars. This comprised both the indebtedness incurred abroad and at home by the Continental Congress, and the debts of the individual colonies in the conduct of the war. When the federal government was established, interest on the debt had fallen into arrears for several years. Among the first recommendations of Alexander Hamilton, on becoming Secretary of the

Treasury, was that overdue interest and principal payable abroad should be met without delay, and that arrangements should be made for liquidating the remainder at an early date. Despite strong protests against a strict fulfilment of the contract to pay off the domestic debt at its face value (because it was known that most holders had acquired the certificates at a large discount), Hamilton urged as a matter of expediency and national honor that all obligations should be met when due.

In reference to the state debts, Hamilton also took the position that it was a wise policy to promote national unity by including this indebtedness as a federal government liability. But notwithstanding Hamilton's optimism, the young republic was not in a position to meet the arrears in foreign debt and, at the same time, discharge the heavy interest burden of the outstanding domestic obligations. It was, therefore, proposed by Hamilton, as a compromise, that the interest rate for ten years should be reduced from 6% to 4% annually. This was accomplished through refunding the domestic debt by Act of Congress, August 4, 1790. This Act provided that two-thirds of the new bonds should bear 6% interest from date of issue and the remaining one-third bear interest at the same rate beginning with the year 1800. To offset the loss of ten years of interest, bondholders were given additional bonds covering the amount and bearing an annual rate of 3%. The state debts were taken over and funded on a similar plan.

On the recommendations of Hamilton, a scheme was adopted for the prompt liquidation of the new obligations. A sinking fund was provided, which with slight subsequent modifications, remained in effect until after a lapse of fifty years; the total Revolutionary debt, which in 1795, amounted to the then stupendous sum of \$77,496,869, was reduced by \$32,000,000 just prior to the War of 1812.¹ Thus began the sound American national credit policy which, as so ably stated

¹ During this period an additional loan of \$13,000,000 was floated to finance the Louisiana purchase.

by Hamilton in his Report on Manufactures submitted to Congress in 1791:

As the vicissitudes of nations beget a perpetual tendency to the accumulation of debt, there ought to be in every government a perpetual, anxious and increasing effort to reduce that which at any time exists, as fast as shall be practicable, consistently with integrity and good faith.

The effect of Hamilton's vigorous financial policy was the almost steady rise in United States Government credit at home and in the leading European markets. Stability of national credit produced a basis for sound domestic business prosperity and ample government revenues. All this was assisted by the creative financial genius of Hamilton, whose measures of fiscal reform, in addition to provision for the funding and amortization of the national debt, included the establishment of a mint, a convenient system of coinage, a sound currency provided by the First Bank of the United States, and adequate taxation to cover expenditures of all kinds. During the critical period following the adoption of the Constitution, the current federal expenses barely exceeded a half million dollars annually, whereas the debt burden amounted to from four to five times this amount.

The Post-Revolutionary Borrowing.—During the interval between the establishment of the federal government under the Constitution and the War of 1812, the national debt, including the \$13,000,000 raised for the Louisiana Purchase, had been reduced from about \$80,000,000 to \$45,000,000. In this period, there were frequent and pressing incentives to large national expenditure. Indian wars, domestic insurrections, the creation of a national capital, the construction of fortifications, river and harbor improvements, the building of a navy, the founding of national banks and the provision for more adequate transportation facilities, together with an established credit, all encourage borrowing on a large scale.

The Hamiltonian policy, however, prevailed, and it was not until the War of 1812 that there was a pronounced upward turn in the volume of outstanding obligations. The war resulted in a new debt of about \$82,000,000, most of which was represented by bonds. As there was little surplus capital in the country at this time, and as borrowing abroad was almost impossible because of the Napoleonic Wars, the government naturally experienced considerable difficulty in floating loans. Thus, in 1813, in order to raise \$16,000,000, it was necessary to sell over \$18,000,000 of 6% bonds at 88. The next year a 6% issue of \$15,000,000 was sold at 80. Supplementing its bond issues, the government resorted in this period to temporary financing through issues of treasury notes. These were sold without much difficulty, and by the close of 1817 were redeemed or converted into long-term obligations. When the war ended in 1814, the outstanding public debt slightly exceeded \$127,000,000, the maximum figure until the outbreak of the Civil War.

Civil War Borrowing.—When the Civil War began in April, 1861, the total national debt did not exceed \$90,000,000. In the half-century that had elapsed since the last serious war that involved heavy financing, the population had grown from about 8,000,000 to approximately 31,500,000, and the territory of the nation had more than doubled. In the meantime, there had swept over the country a fever for internal improvements. A brief war had been conducted against Mexico, in 1848, severe financial panics had taken place in 1837 and 1857, and a new era of geographical expansion extending to the Pacific Coast and north to 40° 40" had been set in motion. Throughout this period, however, the protective tariff policy of the government created surplus revenues, the disposition of which became a more vexing problem than the national debt ever had been.²

² For account of the distribution of surplus among the states, see next chapter.

The cost of the four years of civil strife which followed the firing on Fort Sumter in April, 1861, was far beyond the credit capacity of the nation. The complete financing of the war through successive bond issues was recognized by the eminent Secretary of the Treasury, Salmon P. Chase, as impracticable. In the special session of 1861, Congress adopted a measure for the issue of \$50,000,000 treasury notes. In the next year, an additional issue of \$150,000,000 of United States notes was sanctioned. The latter were made full legal tender and receivable for all government dues except duties on imports and the interest on the public debt. Subsequent legislation authorized a maximum issue of \$450,000,000 of non-interest bearing notes, which are still familiarly known as "greenbacks." In addition, approximately a half billion of legal tender interest bearing notes were issued, thus bringing the total government note issues up to about one billion of dollars.

The long-term government financing of the period consisted of a variety of separate bond issues, chief among which: (1) the "seven-thirties" which were paid off in 1868, and (2) the "five-twenties" which bore 6% interest and were redeemable in five years and made payable twenty years after issue. The "seven-thirties" were originally issued to mature in three years, but were extended, and the amount increased by about \$600,000,000. The annual interest rate of 7.30% was adopted so as to furnish holders two cents per day for each \$100 of bonds. The interest and principal were payable in currency, and could be converted into the "five-twenties" at the option of the holders. The sale of these securities was conducted directly by the Treasury Department and through private agencies, chief among whom was the well known civil war financier, Jay Cooke. Bank assistance in the distribution was not very efficient until after the passage of the National Bank Act in 1863. Under the provisions of this Act, a new currency secured by the government debt was provided by

banks operating only under federal charters. Thus, the national banks became the principal purchasers of the national debt. National bank notes could be issued only when they were secured by an equivalent face value of United States Government bonds. A tax of 10% per annum was later placed on notes issued by state chartered banks to drive them out of circulation. As a result of this legislation, United States Government bonds received a greatly enlarged market, but in course of time, owing to the eagerness of national banks to expand their note issues, the obligations were removed from the general investment field, the bonds, through the instrumentality of the national banks having in effect become converted into currency. The government, figuratively speaking, coined its debt.

For about a half-century following the enactment of the National Bank Act, the United States had an abnormal currency system by which the supply of circulating medium was adjusted to the size of the national debt. This ridiculous situation, however, helped the market for United States bonds in a period when the adverse factors of war, waste and political pessimism made the flotation of additional government credits almost impracticable. After the dark days of the civil strife had passed, and the union of the states secured, the "circulation privilege" of the bonds became so valuable to the banks and their prices ruled so high in relation to investment yield, that few but the national banks could afford to buy them. By buying the bonds, the banks received interest not only on the bonds, but on the loans and discounts they made through issuing their bank notes.³

The World War Financing.—The recovery of the heavy burden of the Civil War debt, which approximated \$3,000,000,000, was comparatively rapid, and in spite of the addi-

³ For an interesting discussion of this situation, see an article by Prof. Lyon, entitled "The Gamble in Governments by National Banks," published in *Moody's Magazine*, March 1911, and reprinted in Chamberlain's *Principles of Bond Investment*, pp. 523-530.

tional bond issues necessitated by the resumption and maintenance of a gold currency basis, by the Spanish-American War and by the construction of the Panama Canal, the United States, when it entered the World War in 1917, had a national debt of about one billion dollars, or less than that of its leading metropolis, the City of New York. But modern war is conducted with unprecedented expenditures, so that after a period as an active belligerent of less than two years the debt of the United States Government mounted to more than \$24,000,000,000, or greater than all the money spent by the national government, including war expenditures, from the Declaration of Independence to the end of the nineteenth century.

The American government financing of the World War was comparatively easy compared with its own past experience, and with that of its allies. Unlike the financing of its previous military struggles, there was no resort to unduly excessive currency issues, or to fiat money. The Federal Reserve System that had been recently established furnished a medium for currency regulation as well as for the arrangement, funding and distribution of both the short-term and long-term credits demanded by the government.

The new facilities for borrowing, combined with the great wealth and prosperity of the nation resulted in the flotation of the various Liberty Loans at lower rates of interest than had ever been accomplished during any former period of heavy war financing. This new war debt, unlike the Civil War issues, and most of the loans subsequent thereto, does not bear the "circulation privilege," though it is quite probable that the discount privileges offered by the federal reserve banks to member banks on the basis of their government bond holdings had much the same effect. The wide distribution of the Liberty Bonds among the population was probably the most distinctive feature of the war financing. It converted the American people into a nation of investors, and thus re-

lieved the strain upon the nation's banking facilities, that would have inevitably resulted in a resort to fiat (*i.e.*, unsecured paper) currency. Moreover, unlike the Civil War financing, war bonds were not sold at a discount, and no agents were employed or commissions paid to market the securities. In the short space of seven years since the flotation of the first issue, all the Liberty Loan Bonds were selling above their face value, and in line with the policy laid down by Alexander Hamilton, something like \$3,500,000,000, or almost 15% of the maximum of the debt, was cancelled through sinking fund and other redemption provisions before the end of 1924.

Outstanding National Government Bonds.—The long-term funded debt of the United States may be classified under two headings, *viz.*: (1) the old issues created before April, 1917, and (2) the war bonds and subsequent issues. The outstanding issues of the pre-war period are shown on page 195. Of the so-called "old" issues, the Panama Canal bonds, Series of 1911, the Conversion 3's of 1913, and the Postal Savings Bonds, are not available for circulation privileges.

Since the establishment of the Federal Reserve System, steps have been taken to eliminate gradually and indirectly the circulation privilege from all the outstanding national government bonds. The Federal Reserve Act of 1913 authorized the purchase by the twelve federal reserve banks from national banks at par of the Consol 2 per cents and the two series of Panama Canal 2 per cents at not to exceed \$25,000,000 par value of the bonds per year, whenever the Federal Reserve Board approves. Of the bonds thus purchased, when not securing bank notes, the federal reserve banks may exchange one-half for the conversion 3's due 1943 and one-half for one-year 3% treasury gold notes. Up to March 1, 1924, about \$55,000,000 of bonds with circulation privilege have been thus withdrawn from the public.

PRE-WAR INTEREST-BEARING DEBT OUTSTANDING NOVEMBER 30, 1924⁴

Title of Loan	Authorizing Act	Rate	When Redeemable or Payable	Amount Issued	Amount Outstanding
Consols of 1930.....	March 14, 1900.....	2%	Payable after Apr. 1, 1930.....	\$646,250,150	\$599,724,050
Loan of 1925.....	Jan. 14, 1875.....	4%	Payable after Feb. 1, 1925.....	162,315,400	118,489,900
Panama Canal Loan: Series 1906.....	June 28, 1902, and Dec. 21, 1905.....	2%	Redeemable after Aug. 1, 1916; pay- able Aug. 1, 1936.....	54,631,980	48,954,180
Series 1908.....	June 28, 1902, and Dec. 21, 1905.....	2%	Redeemable after Nov. 1, 1918; pay- able Nov. 1, 1938.....	30,000,000	25,947,400
Series 1911.....	Aug. 5, 1909, Feb. 4, 1910, and March 2, 1911.....	3%	Payable June 1, 1961.....	50,000,000	49,800,000
Conversion bonds.....	Dec. 23, 1913.....	3%	Payable 30 years from date of issue.....	28,894,500	28,894,500

⁴ *The Commercial and Financial Chronicle*, State and City Supplement, December 1923.LIBERTY LOANS AND POST-WAR LONG-TERM OBLIGATIONS
November 30, 1924

Title of Loan	Authorizing Act	Rate	When Redeemable or Payable	Amount Issued	Amount Outstanding
First Liberty Loan— 3½s of 1932-1947.....	April 24, 1917.....	3½%	Redeemable on or after June 15, 1932; payable June 15, 1947.....		
Convertible 4s of 1932- 1947.....	April 24, 1917, Sept. 24, 1917.....	4%	Redeemable on or after June 15, 1932; payable June 15, 1947.....		
Convertible 4½s of 1932-47.....	Apr. 24, 1917, Sept. 24, 1917, as amended.....	4½%	Redeemable on or after June 15, 1932; payable June 15, 1947.....		
Second converted 4½s.....	Apr. 24, 1917, Sept. 24, 1917, as amended.....	4½%	Redeemable on or after June 15, 1932; payable June 15, 1947.....		
Second Liberty Loan.....	Sept. 24, 1917.....	4%	Redeemable on or after Nov. 15, 1927; payable Nov. 15, 1942.....	1,989,435,550	1,951,523,650
Second Liberty Loan, conv.	Sept. 24, 1917, as amended.....	4½%	Redeemable on or after Nov. 15, 1927; payable Nov. 15, 1942.....	3,807,865,000	3,104,571,400
Third Liberty Loan.....	Sept. 24, 1917, as amended.....	4½%	Redeemable on or after Oct. 15, 1933; payable Oct. 15, 1938.....	4,175,650,080	2,978,776,250
Fourth Liberty Loan.....	Sept. 24, 1917, as amended.....	4½%	Redeemable on or after Oct. 15, 1933; payable Oct. 15, 1938.....	6,964,581,100	6,324,489,850
Treasury Bonds of 1947- 1952.....	Sept. 24, 1917, as amended.....	4½%	Redeemable on or after Oct. 15, 1947; payable Oct. 15, 1952.....	763,962,300	763,948,300
U. S. Govt. 4's, Treasury Bonds 1924.....	Sept. 24, 1917, as amended.....	4%	Redeemable on or after Dec. 15, 1944; payable Dec. 15, 1954.....	224,513,500	224,513,500

Liberty Loans.—The various Liberty Loans and other long-term obligations of the United States issued since the war, as described by the *Commercial and Financial Chronicle*, are shown in the table on page 195.

To the foregoing securities outstanding may be added approximately \$3,375,000,000 of Treasury notes, maturing in from six months to three years, Treasury savings certificates of about \$350,000,000 and about \$12,000,000 of Postal Savings Bonds. The Postal Savings Bonds and the Treasury Savings Certificates (which mature five years from date of issue and on which compound interest accumulates until paid) are distributed chiefly among small investors, but the Treasury notes find the best market because of tax-exemption privileges among large investors and banks.

The provisions relating to issue, redemption, tax exemption and the like with reference to each Liberty Loan enumerated in the foregoing table are summarized by the *Commercial and Financial Chronicle* as follows:

LIBERTY LOAN OF 1917, FIRST.—Authorized by Act of April 24, 1917, entitled "An Act to authorize an issue of bonds to meet expenditures for the national security and defense, and for the purpose of assisting in the prosecution of the war, to extend credit to foreign governments, and for other purposes." Under the Act the Secretary was empowered to borrow with the approval of the President, up to \$5,000,000,000, exclusive of the sums authorized by Section 4 of the Act (temporary credits to be replaced by Liberty Loans) to meet expenditures authorized for the national security and defense and other public purposes authorized by law and to issue therefor bonds of the United States. The bonds all bear $3\frac{1}{2}\%$ interest and are payable in United States gold coin of the present standard of value, and exempt both as to principal and interest, from all taxation, except estate or inheritance taxes, imposed by authority of the United States or its possessions or by any State or local taxing authority. The bonds do not bear the circulation privilege. Provision was made by Section 2 of the Act for the establishing of credits to and the purchasing of obligations of foreign governments, \$3,000,000,000, or so much thereof as might be necessary being appropriated for the purpose. Under Section 3 it was provided that payments to the United States on or

before maturity by foreign governments for obligations incurred by them under Section 2 must be applied to the redemption or purchase at not more than par and accrued interest of any bonds of the United States issued under authority of the Act; and if such bonds are not available for this purpose the Secretary of the Treasury shall redeem or purchase any other outstanding interest-bearing obligations of the United States which may at such time be subject to call or which may be purchased at not more than par and accrued interest.

Under the Act \$2,000,000,000 gold bonds, running 15-30 years and bearing 3½% interest payable semi-annually June 15 and Dec. 15 were offered for subscription, denominations of coupon bonds being \$50, \$100, \$500 and \$1,000, and registered bonds \$100, \$500, \$1,000, \$5,000, \$10,000, \$50,000 and \$100,000. Subscriptions were received from over 4,000,000 individual subscribers and aggregated \$3,036,226,850. In scaling down the allotments to the total offered, all subscriptions up to and including \$10,000 were awarded in full, but on larger amounts the allotments ranged from 60% down to 20.17%. The total of bonds issued was \$1,989,455,550, but only \$1,409,999,550 remained outstanding Sept. 30, 1923, of 3½s with full tax exemption; in addition \$8,680,900 appear as First Liberty Loan Convertible 4s; \$529,502,300 as converted 4¼s and \$3,492,150 Seconds Converted 4¼s. The total of the First Liberty Loan issues outstanding, converted and unconverted, Nov. 30, 1924, was \$1,911,523,650.

SECOND LIBERTY LOAN OF 1917.—Authorized by Act of Sept. 24, 1917, entitled "An Act to authorize an additional issue of bonds to meet expenditures for the national security and defense, and for the purpose of assisting in the prosecution of the war, to extend additional credit to foreign governments, and for other purposes."

The Act authorizes the issuance of not exceeding \$7,538,945,460 bonds, bearing not exceeding 4% interest, in addition to the \$2,000,000,000 bonds issued under authority of the Act of April 24, 1917. *Provided*, That of this sum \$3,063,945,460 shall be in lieu of that amount of the unissued bonds authorized by Sections 1 and 4 of the Act approved April 24, 1917, \$225,000,000 shall be in lieu of that amount of the unissued bonds authorized by Section 39 of the Act, approved Aug. 5, 1909, \$150,000,000 shall be in lieu of the unissued bonds authorized by the joint resolution approved March 4, 1917, and \$100,000,000 shall be in lieu of the unissued bonds authorized by Section 400 of the Act, approved March 3, 1917.

Section 4 provides for the convertibility of the bonds into any issue thereafter bearing a higher rate of interest. Under Section 7 it is

provided that none of the bonds shall bear the circulation privilege. The bonds are exempt, both as to principal and interest from all taxation now or hereafter imposed by the United States, any State, or any of the possessions of the United States, or by any local taxing authority, except (a) estate or inheritance taxes, and (b) graduated additional income taxes, commonly known as surtaxes, and excess profits and war profits taxes, now or hereafter imposed by the United States, upon the income or profits of individuals, partnerships, associations, or corporations. The interest on an amount of such bonds and certificates the principal of which does not exceed in the aggregate \$5,000, owned by any individual, partnership, association, or corporation, is exempt from the taxes provided for in subdivision (b) of this section.

Under authority of the Act, the Secretary of the Treasury offered for subscription on Oct. 1 an issue of \$3,000,000,000 or more of 4% 10-25-Year bonds of the same denominations as the first Liberty Loan, reserving the right to allot bonds in excess of \$3,000,000,000 to the extent of not over one-half of the sum by which the subscriptions received exceeded \$3,000,000,000. Subscriptions totaled \$4,617,532,300, or \$1,617,532,300 more than the minimum sought, and on the basis of 50% of the oversubscriptions, the amount issued was \$3,807,865,000; all those up to \$50,000 were allotted in full. Total number of subscribers was approximately 9,400,000. The total of the Second Liberty Loan issues, converted and unconverted, outstanding Nov. 30, 1924, was \$3,104,571,400.

THIRD LIBERTY LOAN OF 1918.—Authorized by Act of April 4, 1918, amending the Act of Sept. 24, 1917. Following the general lines of the Act which amends it, it authorizes the issuance of not exceeding \$12,000,000,000 bonds, bearing not exceeding 4¼% interest, in addition to the \$2,000,000,000 issued under authority of the Act of April 24, 1917, but including the bonds outstanding under the Second Liberty Loan and the \$3,063,945.460 reserved for unissued bonds of earlier Acts.

Section 3 provides that holders of bonds bearing interest at a higher rate than four per centum per annum, whether issued under Section 1 or upon conversion of three and one half per centum bonds issued under the Act approved April 24, 1917, or upon conversion of four per centum bonds issued upon conversion of such three and one half percentum bonds, shall not be entitled to any privilege of conversion under or pursuant to this section or otherwise. Under Section 7 it is provided that none of the bonds shall bear the circulation privilege. The bonds are non-convertible and not subject to redemption

before maturity, but are exempt from taxation as indicated above under Second Liberty Loan and receivable for Federal inheritance taxes.

Under authority of the Act, the Secretary of the Treasury offered for subscription on April 6, 1918, \$3,000,000,000 4¼% 10-year gold bonds with coupon bonds for \$5,000 and \$10,000 and registered bonds for \$50 in addition to the same denominations as the First Liberty Loan, reserving the right to allot additional bonds to the extent of full amount of any oversubscription. Subscriptions totaled \$4,175,650,050, or \$1,175,650,050 more than the minimum sought, and all were allotted. Total number of subscribers was 18,376,815. Outstanding Nov. 30, 1924, \$2,978,776,250.

FOURTH LIBERTY LOAN OF 1918.—Authorized by Act of July 9, 1918, amending previous Liberty Loan enactments. Section 1 increases from \$12,000,000,000 to \$20,000,000,000 the total of bonds bearing not exceeding 4¼% interest that may be issued under the various Acts. Section 2 increases the loans or credits that may be extended to the Allies from \$5,500,000,000 to \$7,000,000,000, in addition to the \$3,000,000,000 authorized under the First Liberty Loan Act. Section 3 provides that, with the approval of the Secretary of the Treasury, bonds, while beneficially owned by a non-resident alien individual, or by a foreign corporation, partnership or association, not engaged in business in the United States, shall be exempt both as to principal and interest from any and all taxation now or hereafter imposed by the United States, any State, or any of the possessions of the United States, or by any local taxing authority.

Under authority of the Act, the Secretary of the Treasury offered for subscription on Sept. 28, \$6,000,000,000 4¼% 15-20 (optional) gold bonds of the same denomination as those of the Third Loan, reserving the right to allot additional bonds to the extent of full amount of any oversubscription. Subscriptions totaled \$6,964,581,100, or \$964,581,100 more than the minimum sought, and all were allotted. Total number of subscribers was approximately 21,000,000. The bonds, like all other Liberty Loan issues, are not available for bank note circulation.

Supplementary to the passage of the above authorizing Act, there was passed and signed by the President on Sept. 24, 1918, a bill designed to stimulate sales of Liberty bonds by exempting from the supertaxes and from war excess profits taxes interest on a certain amount of Liberty bond holdings. The principal provisions of the bill are:

(1) The interest on an amount of bonds of the Fourth Liberty

Loan, the principal of which does not exceed \$30,000, owned by any individual, partnership, association, or corporation, shall be exempt from graduated additional income taxes, commonly known as surtaxes, and excess profits and war-profits taxes, now or hereafter imposed, upon the income or profits of individuals, partnerships, associations, or corporations;

(2) The interest received after Jan. 1, 1918, on an amount of bonds of the First Liberty Loan converted, dated either Nov. 15, 1917, or May 9, 1918, the Second Liberty Loan, converted and unconverted, and the Third Liberty Loan, the principal of which does not exceed \$45,000 in the aggregate, owned by any individual, partnership, association, or corporation, shall be exempt from such taxes: *Provided, however,* That no owner of such bonds shall be entitled to such exemption in respect to the interest on an aggregate amount of such bonds exceeding $1\frac{1}{2}$ times the principal amount of bonds of the Fourth Liberty Loan originally subscribed for by such owner and still owned by him at the date of his tax return; and

(3) The interest on an amount of bonds, the principal of which does not exceed \$30,000, owned by any individual, partnership, association, or corporation, issued upon conversion of $3\frac{1}{2}\%$ bonds of the First Liberty Loan in the exercise of any privilege arising as a consequence of the issue of bonds of the Fourth Liberty Loan, shall be exempt from such taxes.

The exemptions provided in this section shall be in addition to the exemption provided in Section 7 of the Second Liberty Bond Act in respect to the interest on an amount of bonds and certificates, authorized by such Act and amendments thereto, the principal of which does not exceed in the aggregate \$5,000, and in addition to all other exemptions provided in the Second Liberty Bond Act.

The amount of Fourth Liberty Loan bonds outstanding Nov. 30, 1924, was \$6,324,489,850, bearing $4\frac{1}{4}\%$ interest.

The Victory Loan, consisting of three-year notes, matured in 1922.

TREASURY LONG-TERM BOND ISSUE OF 1922.—Under authority of the Act of April 24, 1917, as amended, the Secretary on Oct. 9, 1922, made an offering of an issue of \$500,000,000 $4\frac{1}{4}\%$ Treasury bonds for refunding purposes. The bonds are dated Oct. 16, 1922, and mature Oct. 15, 1952, the Government having the option of redeeming the bonds on any interest date on or after Oct. 15, 1947, on four months' notice. Cash subscriptions totaled no less than \$1,399,851,900. It was announced that all subscriptions up to \$10,000 would be allotted in full. The Secretary also reserved the right to accept additional

applications where Victory Notes and Treasury certificates of indebtedness maturing Dec. 15 were tendered in payment. Total allotments, both cash and exchanges, amounted to \$763,962,300. On Nov. 30, 1924, \$763,948,300 of the Treasury bonds of 1922 were outstanding.

TREASURY LONG-TERM BOND ISSUE OF 1924.—On Dec. 3, 1924 another offering of long-term bonds was made by the Secretary of Treasury. These consisted of an issue of 4% bonds in the amount of \$200,000,000 or thereabouts for cash, with the right to allot additional bonds to extent that 4¾% Treasury notes and 4% Treasury certificates of indebtedness, both maturing March 15, 1925, or the Third Liberty Loan bonds, bearing 4¼% interest, were tendered in payment. Cash subscriptions closed Dec. 4 and totaled \$1,400,000,000; the amount allotted was \$224,513,500. Exchange subscriptions closed Dec. 20 and it was then announced that allotments in full reached about \$550,000,000. Bonds were issued under the Act of Sept. 24, 1917, as amended, are dated Dec. 15, 1924 and mature Dec. 15, 1954, but may be redeemed on and after Dec. 15, 1944, in whole or in part, at par and accrued interest, on any interest day or days, on four months' notice.

Market for United States Government Bonds.—In discussing the market for United States Government bonds, a distinction should be made between the old issues carrying the circulation privilege and the later obligations. The former, because of the large demand by the national banks seeking a basis of note issue, have for many years commanded a high premium despite the low interest rate. In 1922, when most 4¼% Liberty Bonds were selling at a discount, the 2% Consols sold from 102½ to 104¼. These bonds are almost exclusively held by the national banks. Thus, the Comptroller of the Currency reported that of a total outstanding amount of \$599,724,050 on July 1, 1924, \$589,086,200 were held to secure note issues. On the same date, \$76,687,050 of the 4's of 1925, were owned by the banks, of a total of \$118,489,900. Similarly, the Panama Canal 2's, the last issues available for the circulation privilege, were almost entirely in the hands of the national banks.

The Liberty issues, as already remarked, are the most widely distributed securities in the world. The thrift idea

inculcated during the war not only resulted in the widespread purchase of the war bonds, but it also gave an impetus to saving and investing. The mass of the American people, who prior to the war, knew little and cared less about investment securities, because of the pride in ownership of their war bonds, have in large part, retained their holdings, and (as evidenced by the growing demand for bonds of small denominations) are ambitious to become or remain investors. In this respect, they are following the example of the French people who, on the whole, are thrifty and select the obligations of their national government as the best investment medium.

The Future of United States Government Bonds.—Following out the debt amortization policy inaugurated by Hamilton, the outstanding volume of United States securities is gradually being reduced. The interest bearing debt reached its peak in 1919, at the end of which year it exceeded twenty-five billion. At the end of 1924, it was about twenty-one billion. Since a large part of the war debt represents loans to the allies, the application of the repayments on this account to reduction of outstanding Liberty Bonds may mean a more rapid extinction of national indebtedness than contemplated in the sinking fund arrangements proposed by Congress. Unless in the meantime the cancelled portion is replaced by new issues, the yield on all United States Government bonds, notwithstanding their higher taxability as compared with municipal government issues, is likely again to become so low as to invite purchase only by the very wealthy.

REFERENCES

- DEWEY, DAVIS R. *Financial History of the United States*, 5th Ed. New York, Longmans, Green & Co., 1915, 550p.
- FISK, H. E. *Our Public Debt—an Historical Sketch with a Description of United States Securities*. New York, Bankers Trust Co., 1919, 126p.
- MITCHELL, WESLEY. *A History of the Greenbacks*. Chicago University Press.
- SECRETARY OF THE TREASURY. *Annual Reports*.

CHAPTER .XVII

STATE BONDS

Sovereignty of States.—The nature of state obligations is not generally understood. In most bond classifications, they are usually placed in the same general group with municipal, county, town, village and school district bonds. As shown on page 162, a distinction, however, should be drawn between state bonds and the bonds of minor political subdivisions. State bonds are similar in character to national bonds. This is due as already pointed out, to the position of the states in the American scheme of government.

Students of United States history are familiar with the great struggle over the question of states' rights. Early in the history of the Union, some of the states claimed that they were sovereign powers and could not, therefore, be sued except with their own consent. When the Constitution was first adopted, however, no provision was inserted defining state sovereignty, and shortly thereafter states were sued by individuals in the federal courts. In 1792, for example, Chism, a citizen of North Carolina, brought suit in the United States Supreme Court against the state of Georgia and the following year was granted a judgment, the court holding that under the federal Constitution a state could be sued by an individual. This decision created considerable political dissatisfaction both in the southern and northern states. The Legislature of Georgia expressed its disapproval by at once passing an act condemning to death, "without benefit of clergy," any marshal of the United States who should presume to serve a process against the state at the suit of an individual. The decision led to the unanimous adoption of the Eleventh Amendment to the Constitution, which definitely

determined that a state could not be sued by individuals or private corporations. The amendment reads:

The judicial power of the United States shall not be construed to extend to any suit in law or equity commenced or prosecuted against one of the United States, by citizens of another state, or by citizens or subjects of any foreign state.

By this amendment a United States court is prohibited from hearing any case in which a private party directly sues a state. An individual who holds a repudiated or defaulted obligation of one of the United States is thus prevented from taking legal action for his relief directly against a state in the federal courts—a very important feature to remember in connection with state bonds.

Although the Eleventh Amendment prevents an individual from suing a state in the federal courts or in its own courts without its consent, the Supreme Court has held that there is no prohibition against a state suing individuals and that in such suits appeals can be made by either party to the federal courts when a constitutional question is involved. As pointed out by Professor Scott in his excellent study of the repudiation of state debts:

By virtue of this decision, the federal courts may serve as a shield for the protection of the individual when the state attempts to prosecute him unjustly, but it cannot help him when the state has already done him a wrong, and he seeks redress.¹

Incidental relief, however, against attempt at state repudiation of its obligations, have been afforded by the ruling of the Supreme Court that individuals may appeal to the federal courts in suits instituted against them by the states. The Legislature of Virginia in 1871 passed a law making the coupons of her bonds receivable for taxes and other dues to the state. A new legislature desiring to repudiate the obligations, the coupons presented in this way were refused, and the

¹ William A. Scott, *The Repudiation of State Debts*, p. 12.

state tax officials proceeded to levy against the property of those who insisted on offering coupons for payments. The Supreme Court in a series of decisions, known as "The Virginia Coupon Cases," declared that a tender of the coupons released the citizen from further obligation to pay taxes, and that the law forbidding the receipt for taxes was unconstitutional.

One State Suing Another.—States are thus not completely freed from legal process under the Eleventh Amendment. Moreover, any state is still permitted to enter suit against a sister state. The United States Government may also sue a state. The federal courts, therefore, can hear and pass judgment in a suit in which one state has a claim against another because of the latter's failure to meet its obligations on a debt. Thus, the state of North Carolina was at one time sued by South Dakota. It had issued certain bonds to aid the construction of a railroad and later refused to pay the principal and interest. South Dakota had received as a gift some of these bonds and it entered suit against North Carolina in the United States Supreme Court to enforce payment of the bonds. The court, on February 1, 1904, entered a judgment against North Carolina. For a time the state ignored the judgment. The United States marshal, however, threatened to auction off property belonging to the state, and the final result was that South Dakota received the full amount of the judgment.

Immediately after this occurred, various states received numerous offerings of repudiated and unpaid bonds of other states for purposes of collection. The United States Supreme Court decision, however, rendered the enforcement of such claims impossible unless the ownership of the bonds by a state was absolute and the suit was brought entirely and exclusively for the benefit of the state. A certain New York attorney on several occasions offered to pass over some North Carolina bonds belonging to clients to several other states

with the condition that individuals giving the bonds were to receive a certain part of the proceeds in case judgment was obtained. None of the states accepted the bonds because by the Supreme Court ruling no recovery could be made under a conditional gift. Holders of repudiated and defaulted state bonds must, therefore, keep in mind that the security of the bonds is still largely based on the faith and credit of the debtor states.

State Constitutional Provisions.—States, however, can give their consent to private parties to sue them for the recovery of a debt. A number have sought to strengthen their credit and make a better market for their own bonds by inserting provisions in their debt contracts which in essence make them suable in case they default on their obligations. The constitutions of many of the states sanction this. The provisions differ widely among the various states and have been changed from time to time to meet the borrowing conditions. A number of the states have gone to the extent of limiting the amount of the state debt. A few constitutions, for example, those of Florida, Georgia, Indiana, and Ohio, prohibit the state governments from incurring any additional long-term indebtedness except for defensive purpose. Most constitutions limit the purposes for which indebtedness may be incurred. The constitutional limitations on state debts apply in some cases to all debts and in others only to debts incurred for so-called non-productive purposes. They are generally very severe in those states that have come to grief because of reckless borrowing in the past. Most state constitutions now prohibit the use of state credit to finance private enterprises, such as railroads, canals, grain elevators, and similar undertakings.

Indirect Means of Enforcing Payment.—Although private holders of state obligations are in many cases prohibited from suing directly to recover interest and principal, they have frequently indirect means open to them for enforcing payment.

There is a clause in the federal Constitution which prohibits a state from passing legislation impairing the obligation of a contract. As the creation of a debt constitutes a contract, no state can legally pass a law nullifying a valid debt. This constitutional inhibition occasionally opens up a means of enforcing the payment of a state indebtedness. The obligations of some states are issued with a provision that certain taxes are to be levied for the payment of the interest and principal of that debt, and as this provision is a part of the contract the holder of the bond may sue to compel a state official to levy the tax, or he can sue the state officer to force him to take legal measures for the payment of the debt. This right, however, is of limited scope and of doubtful application as will be shown below.

The relief that may be afforded to bondholders under the constitutional provision prohibiting a state to pass any law impairing the obligation of a contract has been made effective by the assumption of jurisdiction by the federal courts of suits involving the conflict of state laws with the provisions of the federal Constitution. If a state law is declared unconstitutional by the Supreme Court, the law has no binding force and an individual can appeal for protection against any act or injury inflicted in executing such a law. The principal applies not only to the constitutions and the laws of the states, but also to the laws and acts of municipalities and other political subdivisions of a state. Accordingly, in this respect, holders of municipal obligations are protected in the same degree as state bondholders. In cases involving the interpretation of state laws with reference to state constitutional provisions, the Supreme Court generally follows the decisions of the highest state tribunals having jurisdiction over such matters. When, however, it is a question to which the state or any of its political subdivisions is a party at interest, such, for example, as a contract between the state and an individual, this rule is abandoned and the federal court gives its own in-

terpretation of the state law. In this way, bondholders are further protected against default or invalidation of their securities through state courts declaring the issues as contrary to the state constitutions.²

It has been argued by some constitutional lawyers that although the Eleventh Amendment prevents a private party from suing a state, the suit may be brought indirectly through an action against a state official. The Supreme Court decisions, however, do not support this view. In the case of *Osborn v. United States Bank*, the Court states that "as the real party cannot be brought before the court, a suit cannot be sustained against the agents of that party."³ Moreover, it is a firm legal principle that a court cannot exercise an executive or ministerial function; that it is limited to judicial powers only; and that it cannot interfere with the official discretion vested in executive officers. In other words, as stated in *Board of Liquidation et al. v. McComb*,⁴ "A court cannot substitute its own discretion for that of executive officers in matters belonging to the proper jurisdiction of the latter." But, as stated in the same decision, "it has been well settled that when a plain official duty requiring no exercise of discretion is to be performed, and performance is refused, any person who will sustain personal injury by such refusal, may have a *mandamus* to compel its performance, and when such duty is threatened to be violated by some positive official Act, any person who will sustain personal injury thereby . . . may have an injunction to prevent it."⁵

It may be concluded, therefore, as expressed by Scott, "that the barriers of the Eleventh Amendment have been pierced at only two points: It does not prevent the federal courts from entertaining cases brought by states against in-

² In the following pages discussing the history of repudiation, it will be noted that refusal to pay obligations has generally been on the ground that the laws creating the obligations were not in accordance with state constitutional provisions.

³ Wheat, 738.

⁴ 92 U. S. 531.

⁵ This subject is discussed further in the next chapter on Municipal Bonds.

dividuals, and it does not prevent the courts from pronouncing an opinion concerning the constitutionality of state laws which may be involved in cases which come under their jurisdiction, and from thus restraining state officers from executing unconstitutional laws.”⁶

Limitations on Borrowing and Taxing Power.—It has been seen that state credit is based largely on taxing power. The Constitution of the United States places no definite limit on the extent of taxing or borrowing of a state within its respective territory. It can tax its citizens to the utmost. It can also tax the citizens of other states residing or deriving income within its jurisdiction. A state, however, cannot take property without due process of law, nor can it interfere with the taxing powers of the federal government. The taxing and borrowing power of many states moreover is subject to their own respective constitutional limitations. In other words, maximum debt limit or a maximum tax rate can be fixed by state constitutional provisions.

Aside from constitutional provisions, there are certain practical limitations on the borrowing and taxing powers of the states. A state cannot force loans from its citizens; nor can it very well tax its citizens beyond their incomes. As a charge ahead of its funded obligations, the state may use its revenues to maintain governmental functions, such as police protection, education, administration of justice, and the like, just as a private business enterprise that is in bankruptcy is required to pay its current expenses to maintain itself as a going concern. The creditors of a state, therefore, cannot expect under any circumstances to occupy a better legal position than the creditors of private organizations.

History of State Debts.—The history of state debts is very interesting. During the Revolutionary War, the several members of the confederacy incurred debts to pay their army

⁶ *The Repudiation of State Debts*, pp. 21-22.

levies. The aggregate of this indebtedness was estimated at \$21,500,000. As pointed out on page 188, after the adoption of the Constitution, the federal government assumed these debts and the individual states were practically free from indebtedness. Moreover, about a generation thereafter the states received part of the surplus revenues of the federal government. In 1836, \$27,000,000 was thus turned over to the states. This gave an impetus to vast schemes of internal improvements. The various states began to build railways and canals, and make other costly public improvements. The growth in state debts following 1830 was very rapid. In the five-year period between 1830 and 1835, twelve states of the Union issued new securities aggregating \$40,012,769. This was increased in the following three years by \$107,823,808 additional issues, notwithstanding the receipt of the federal funds of \$27,000,000 in 1836. A fever of state extravagance spread through almost every section of the country. It was most pronounced in the newly settled and less developed states and territories. These became, in the language of Senator Benton of Missouri, "infected with the heresy that state debts were state blessings, and rushed into undertakings for which they were not ripe and for which the credit system had to furnish the means." The consequence was that at the end of 1838 the total of outstanding state indebtedness exceeded the maximum federal debt at any period up to this time. About one-third was incurred in the creation of state banks and the remaining amount largely for the construction or aid of canals and railroads.

Mississippi furnished a good illustration of early state experience in lending financial aid to the establishment of banks. In 1830, the state chartered the Planters Bank, subscribing, through a bond issue, to \$2,000,000 of its capital stock. Eight years later, 1838, the Union Bank of Mississippi was chartered in the same way and an issue of \$5,000,000 of bonds authorized for the same purpose. Both of these institutions

met with reverses; the Union Bank failed less than two years after its organization, and the Planters Bank soon followed suit. The investments of the state in these ventures having turned out badly, the natural impulse of the state's citizens was to avoid the assumed obligations. The bonds in aid of the Union Bank were sold to Nicholas Biddle, an agent of the Second Bank of the United States. They were later deposited by this institution as security for loans in Europe, and in this way came into the possession of European banks and investors. About the same time, bonds of the Territory of Florida also issued in aid of banks and sold abroad were defaulted. Thus, foreign capitalists were among those who suffered losses from the early repudiation of state indebtedness.

Many of the early railroads were built through state subscription, the state governments either issuing obligations to pay for the railroad stock, or guaranteeing the securities issued directly by the railroad companies. In some cases, particularly in the sparsely populated sections, these companies fared badly and their stocks became worthless. Several states in turn defaulted on their obligation to pay interest on securities issued for the railroad stocks. Even the bonds of the richly endowed state of Pennsylvania, issued for canal construction, were in default for a time. Others that had defaulted also resumed interest payments or made settlements with their creditors. Certain southern states, however, particularly Mississippi, Georgia, Florida, and Alabama, refused to recognize the validity of a large part of their railroad aid obligations. Foreign investors who had come into possession of large blocks of these bonds had some very unkind words to say about American honesty. The eminent British essayist, Sidney Smith, made this repudiation the subject of a scathing newspaper article which gained wide circulation.

A second period of state debt expansion and subsequent repudiation occurred principally in the South following the

Civil War, largely as the result of economic exhaustion and the notoriously extravagant "carpet bag" rule. Most of the southern states during the reconstruction period either refused or were unable to honor the heavy indebtedness that had been heaped upon them by the "carpet baggers." Among these were Alabama, North and South Carolina, Virginia, Georgia, Louisiana, Tennessee and Arkansas. Virginia and Tennessee have, however, made settlements with their bondholders, and South Carolina and Louisiana readjusted their debts to figures which their resources could support. Similar settlements had been earlier made by Minnesota and Michigan, the two western states which also became bankrupt by indulging in extravagant aid to internal improvements.

The early difficulties in meeting their obligations gradually led the states to restrict the amount of debt they might incur and the amount of bonds they might issue. Probably the best and wisest expedient was to make provision for the payment of the interest and the principal in the same law that created a debt. Some states, for example, have specific tax revenues set aside for the repayment of their bonds. This has enhanced the value of the bonds as investments. State debts are now issued mostly with sinking fund or serial payment provisions to insure prompt payment at maturity. In a number of states the constitution forbids the creation of a state debt unless provision is made for the payment of both interest and principal.

The Virginia-West Virginia Debt Controversy.—An interesting episode in connection with state indebtedness is the long drawn out controversy between the states of Virginia and West Virginia. West Virginia was admitted as a separate state in 1863 by the appropriation of the western section of Virginia. Its first constitution provided that the new state should assume an "equitable portion" of Virginia's public debt as of January 1, 1861. Following the end of the

Civil War, negotiations for an adjustment of the debt were begun between the two states, but it was not until 1919, after a long series of decisions and judgments had been rendered by the United States Supreme Court, that the final terms of the settlement were fixed. However, as early as March 30, 1871, the legislature of Virginia enacted a law providing for the funding of its obligations, and the issue of certificates for one-third of its debt, payable in accordance with the settlement that thereafter should be made in the debt controversy with West Virginia. According to the final terms of settlement, West Virginia was required to pay Virginia \$1,100,000 in cash and \$13,800,000 in 3½% bonds. The controversy has an important bearing on the policy of the Supreme Court in the enforcement of state obligations. Although the court rendered a judgment against the State of Virginia, it denied the petition for its immediate execution on the ground that as a sovereign state, West Virginia would take steps to meet the judgment. Thus, the Supreme Court failed in this case to point out definite legal remedies to enforce judgment obtained against a state for failure to meet its obligations.

Recent Increase in State Indebtedness.—After the southern states had passed through the reconstruction period following the Civil War, and investors had unhappy experiences in some cases with state securities, the creation of new state indebtedness became insignificant. Thus, according to the United States Census, the net state indebtedness declined from \$352,866,898 (or \$9.15 per capita) in 1870 to \$235,453,594 (or \$3.10 per capita) in 1900. There was little change in the net amount of outstanding state obligations until after the World War. A new impetus was then given to state economic activities, and some of the experiences of earlier days of state finance seem to have been forgotten. Between 1919 and 1924, 33 states had issued soldiers' bonus bonds, aggregating \$346,700,000. In addition, other bonds

for road building, port development, state bank aid, and similar purposes have been placed upon the market. The net result has been an increase in state indebtedness to more than one billion dollars, an amount in excess of the national debt at the outbreak of the war with Germany. Considered by itself, this amount is neither large nor excessive. But as during the same period the municipalities have also expanded their borrowing, and as the municipal issues are a burden on the same revenue sources as the state government debts, a combination of the two is essential in order to measure the public borrowing capacity in relation to economic resources.

The Purpose of State Indebtedness.—The expansion of the governmental functions of the state as well as the methods of state finance is well reflected in an analysis of the purposes for which the outstanding state debts were contracted. The increasing state responsibility for the social and economic welfare of its inhabitants; the undertaking of great public improvements and the expenditures growing out of the war, are indicated in a study of the purposes of bond issues.

Highway and bridge construction is the leading purpose for which the outstanding state debts have been incurred. Over a third of the states' debts have been thus incurred. This large percentage is significant when one considers that the development of state highway systems is comparatively recent. It has been fostered by the federal aid plan for highway building. And yet for all this highway development vital to our life and commerce, the per capita debt at the end of 1924 was in the neighborhood of four dollars.

Waterways and harbor improvements come second in the list of purposes of state debt issues. These issues represent about one-quarter of the aggregate. The largest individual item in any classification is \$154,000,000, representing New York State bonds for financing its canal projects.

World War bonus bonds, as pointed out above, have been

responsible for about \$350,000,000 of outstanding indebtedness, a substantial portion of the total. This, of course, does not represent the cost of the war to the states nor even all the securities issued for war purposes. These bonds represent approximately one-third of all the outstanding debt incurred by the states since the United States entered the war, and cover expenditures for welfare work for veterans and for war memorials, as well as the cost of armory and hospital buildings. The \$25,000,000 bond issue of Michigan, the \$20,905,000 issue of Minnesota, \$15,000,000 of Missouri, \$12,000,000 of New Jersey, \$20,000,000 of Ohio, \$10,000,000 of Oregon, \$12,500,000 of Washington and \$45,000,000 of New York, all for soldiers' bonuses, are outstanding examples of how the state debts have been affected by the war. All of Ohio's, Maine's and Washington's bonded indebtedness is in the soldiers' bonus issues and all of New Hampshire's outstanding securities issued after our declaration of war have been for war purposes.

The paternalistic experiments of the agricultural states are reflected in bonds issued for "agricultural aid"—representing about 5% of the aggregate. This includes such items as the bond issues for the capital stock of the Bank of North Dakota (\$2,000,000) and the \$40,000,000 or more of South Dakota for rural credit aid, as well as aid by various states for agricultural experiment stations and forest preserves.

A close chronological study of the state bond issues show that lump sum bond issues for a variety of purposes are decreasing in popularity, bond issues now generally being voted upon for specific purposes provided by the state statutes authorizing the indebtedness. Moreover, the earlier practice of funding into long-term obligations floating debts incurred for various purposes or even current expenses, appears to be almost extinct. This is an indication of the trend towards improved business control and operation of state finances.

Providing Means of Payment.—As already pointed out, a large part of new state issues are provided with a definite source of revenue for their repayment. It is quite common to provide an irrevocable tax levy at the time the bonds are issued to meet the interest and principal. The tax provision in connection with the State of Louisiana Refunding Loan of 1914, is a case in point. The loan and the tax levy were fixed by an amendment to the State Constitution, and an additional clause was inserted that should there be a decrease in taxation values of property in the state, the county auditors are in duty bound to increase the tax rate to avoid a deficit in the revenues applicable to the debt charge. This provision cannot be changed by the state legislature, and any bondholder is given the right to sue out a *mandamus* (i.e., writ of enforcement) to compel the collection of the tax.

New York furnishes an illustration of carefully guarded constitutional provision for the protection of holders of its obligations. An issue of state bonds, with minor exceptions, must be approved by a majority vote of the electors, after the measure has passed the legislature and each new issue is to be for but a single specified purpose. The legislature is required by the state constitution annually to provide for the payment of the interest upon and instalment of the principal of all debts created on behalf of the state except that incurred in anticipation of tax receipts, and in the event of failure to make the necessary appropriations, "the comptroller shall set apart from the first revenues thereafter received, applicable to the general fund of the state, a sum sufficient to pay such interest, instalments of principal or contributions of such sinking fund, as the case may be, and shall so apply the moneys thus set apart. The Comptroller may be required to set aside and apply such revenues as aforesaid at the suit of any holder of such bonds."⁷

⁷ Constitution of the State of New York, Article 7, Section 4.

Investment Factors.—At this point some of the factors which should be considered in appraising the investment qualities of state bonds may be mentioned. The difficulties experienced by the states in the early history of the country have resulted in the observance by them of sound borrowing principles, so that state bonds are now among the safest investments. In point of soundness, they rank next to our own national government bonds. They are now selling at higher prices relative to income yield than Liberty Bonds due to their exemption from federal taxes.

Population and Property Valuation.—As in the case of national bonds, the two principal factors are the population and the taxable resources of the state. The Census reports are reliable for population statistics, but great care should be taken in accepting tax assessors' figures on property valuations. Tax assessors as a rule do not make close appraisals of property value. Moreover, some states have assessments at 100% of the real value, while others assess at as low as 10% or 15%. Thus, a western city is assessed at but 10% of real value while New York City is practically assessed at 100%. It is on such unreliable estimates that the taxable resources of a state are generally calculated.

Profit-Earning Enterprises.—In studying state indebtedness due consideration should also be given to the productive and profit-earning enterprises of the state. Some states have built canals, docks and water works for purposes of profit as well as for the benefit and convenience of its citizens. The Port of Louisiana bonds recently issued by Louisiana are covered by a profit-making enterprise, the ports and docks at New Orleans. Similarly, bonds have been issued by California for harbor development. An early example of a public income-producing enterprise was the Erie Canal of New York State. The tolls which were at first charged for its use were

sufficient in time to extinguish the debt created for its construction.

Expenditures for Internal Improvements.—The amount of a state's debt in relation to its expenditures for internal improvements is a very important point to consider. It is well to know that published figures are often very misleading in such matters and the investor must be on his guard. Besides productive improvements, consideration should be given to the actual net debt of the state; *i.e.*, the total debt less sinking fund assets, when such sinking funds are to be applied directly to the payment of the debt. Some states make a practice of deducting sinking funds as an offset to the outstanding debts.

Natural Resources.—More important from an investor's standpoint than even the purpose for which the bonds are put out are the natural resources of the debtor states. Some western states have profit-bearing resources. Minnesota, for example, has its iron ore beds and South Carolina its beds of phosphate deposits. The revenue received from such sources as an offset to the interest payments on the gross debt, also can be used to extinguish the principal.

Exemption From Federal Taxes.—State bonds have other features which affect their value. Among these is their exemption from federal taxes, which is exceedingly important at the present time. It has been held by the Supreme Court that the federal government has no power to tax the income derived from ownership of state indebtedness or the indebtedness of any subdivision of a state. The power to tax is the power to destroy, and the federal government under the Constitution cannot interfere with the revenues of the states, or the states with the revenues of the the federal government. Hence, state bonds are exempt from federal taxation, and United States bonds are free from all state or municipal taxation.

Marketability.—A feature enhancing the marketability of state bonds are the laws of various states, of which New York is one, permitting savings banks and trustees to invest in state bonds. This privilege has been generally extended to include bonds of all the states, not excepting states which are under the cloud of repudiation. The bonds of certain southern states which were held to be in default were illegal as investments for savings banks in New York until a recent year, when a change in the law limited such defaults to issues authorized since 1878.

Several states, in order to improve the market for their own obligations, compel insurance companies and banks to maintain a reserve consisting of their respective bonds. For example, if an insurance company wants to do business in North Carolina, it must deposit with a state official a reserve consisting of the state's bonds. A market is thus accordingly created for the securities. State bonds are also held by the national banks, particularly when these institutions wish to have collateral to place behind deposits of state funds. They are also generally acceptable as security for postal savings deposits. All these privileges attaching to state bonds give them an attractive market. The securities at the present time are purchased by most careful and cautious investors.

REFERENCES

- BANK OF AMERICA, New York. *A National Survey of State Debts*. New York City, 1922, 77p.
- MATHEWS, JOHN MABRY. *American State Government*. New York, D. Appleton & Co., 659p.
- RAYMOND, W. L. *State and Municipal Bonds*. Boston, Financial Publishing Co., 1923, 388p.
- SCOTT, W. A. *The Repudiation of State Debts—A Study in the Financial History of Mississippi, Florida, etc.* New York, Crowell Publishing Co., 1893, 325p. (An excellent discussion but now out of print.)
- West Virginia Debt Case*. Proceedings in the Virginia Debt Case, including the opinion of the Supreme Court of the United States. Charleston, W. Va., Tribune Printing Co., 1913, 238p.

CHAPTER XVIII

MUNICIPAL BONDS

LEGAL AND ECONOMIC CONSIDERATIONS

Subdivisions of a State.—In the preceding chapter the principal distinguishing feature of state bonds was pointed out, namely, that a private holder cannot sue a state to recover the interest or principal unless the state specifically grants him the right. In the case of bonds of counties, municipalities, and other state subdivisions, which are generally referred to simply as “municipal bonds,” the situation is different. As mentioned on page 163, these are obligations of corporations that can be sued. Political subdivisions of a state exist as privileged civil organizations with all their rights and powers delegated to them by the state. Some are formally incorporated, while others are not. The courts have generally held that bonds issued under the authority of the state by an unincorporated body politic, without governmental jurisdiction of some sort over a prescribed area, are the state’s own obligations. Several years ago the Commission of the Port of New Orleans, which is an unincorporated political organization created for purposes of dock improvement, issued bonds by permission of the State of Louisiana. The question arose subsequently whether the bonds could be considered direct obligations of the state. It was held on good legal authority that they were state obligations, because the Louisiana Port Commission though organized under the state constitution, was not a corporate body politic. The courts, however, have not yet passed on this question, so that the definite legal status of the Louisiana Port Commission bonds is still undetermined.

Classes of Political Subdivisions.—The political subdivisions of a state, for our purpose, may be divided into three

classes: (1) Counties and townships; (2) Municipalities (cities, towns and villages) and (3) Special districts. The distinction is legal and technical and has no direct bearing on the qualities or investment status of the obligations. Holders of county, school district and city bonds have the same rights of enforcement of collection and occupy the same legal position with respect to these rights. Counties and townships in many cases are not formally incorporated, and may have been created merely as a means of local administration of state functions. They are, however, from the standpoint of their obligations and other liabilities, corporate entities and may sue and be sued.

Counties and townships are distinguished from municipalities mainly in their basis of organization. The former are merely territorial subdivisions of the state. They may be created without reference to population and may even be administered directly by state officials. Local self-government of counties or townships is an incidental development. Municipalities, whether classed as cities, towns or villages, are created with reference to population. In the United States they are generally incorporated on the petition of the inhabitants and are more or less self-governing. Their governmental powers are broader and more intense than the mere administration of state functions. They generally supply conveniences such as the provision of water, sewers, parks, playgrounds and other public services. They afford fire and police protection, and may even conduct business activities as the ownership and rental of docks, ferries, tramways and the like. Several important cities of the United States (*e.g.*, Baltimore, Cleveland and Cincinnati) have constructed, purchased or promoted railroads operating outside their own boundaries, in order to promote their commercial importance, not to mention the ownership of vast areas to serve as watersheds and reservoir sites. The modern city, therefore, is much of a business organization as well as a corporate body politic. All this has an important

bearing on their credit standing and the investment qualities of their securities.

The "special districts" in the United States constitute a large class of public corporations distinct in type from counties and municipalities. They differ from both in that they are usually created for the performance of a single governmental function. Thus they may be incorporated as school districts, water districts, sanitary districts, or any other public purpose. Like counties, townships or municipalities, they are allotted definite boundaries. These boundaries may coincide with, overlap, or consolidate existing boundaries of counties or municipalities. Some, like the Chicago Drainage District, take in a metropolis, a county and outlying areas. The Miami Conservancy District comprises parts of nine counties and includes the cities of Dayton, Hamilton and Middletown. Others, like the Philadelphia and Cleveland School Districts, have the same political boundaries as the city. Drainage and irrigation districts in many instances comprise the whole or parts of counties, whereas road and bridge districts may cover only a portion of a township, or a park district comprise only a small section of a city. When special districts are created for constructing or maintaining a public improvement or convenience, the burden of the cost is frequently assessed against the property in proportion to the benefits accruing from the improvement, and the interest and principal of bonds issued to cover the cost may be made payable only from such assessments, and from no other source.¹

The grant of a charter of incorporation by a state to a county, municipality or special district is not considered by the courts as a contract the obligation of which cannot be abrogated or impaired under Article I, section 10 of the Constitution. This was pointed out in the famous Dartmouth College case, which laid down the principle that a corporate charter

¹ Like counties and townships, special districts are not always self governed. They may be administered by state officials, or (in the case of districts comprising but a part of a county or city) by county and city officials.

cannot be revoked unless the state reserves its right to do so in the act of incorporation. Accordingly, a state may abolish municipalities or subdivide them or alter their boundaries. It has been universally held by the federal courts, however, that any legislation of this kind which impairs the equity of creditors or which directly or indirectly invalidates the outstanding obligations of the municipalities affected, is in violation of the constitutional provision against abrogation or impairment of the obligation of a contract.

The important decision covering this point is the *Memphis* case. In 1879, the City of Memphis, Tenn., lost a large part of its population because of a severe yellow fever epidemic. Property values in the city limits declined to an extent that rendered impossible the payment of the charges on the city debt. The state legislature, seeking to relieve the city of its debt, formally abolished it as a public corporation. Subsequent suit of bondholders in the federal courts, however, led to the decision that the revocation of the city's charter was unconstitutional and therefore null and void insofar as it relieved the city of its obligations. Accordingly, a settlement with the bondholders had to be arranged. The city of Mobile, Alabama, had a similar experience in 1881. Investors in United States municipal bonds, accordingly, are protected equally with the holders of state bonds in their rights under the constitutional prohibition against state legislation impairing contracts.

Taxing and Borrowing Powers.—Two of the powers that are delegated by a state to a political subdivision are: the taxing power, and the borrowing power. In connection with the borrowing power, the courts have generally held that the right to borrow by issuing negotiable securities must be delegated directly by the state and cannot be implied from a grant of other powers. It is otherwise in the case of the taxing power. Every political subdivision usually has a right to tax in some form. These two powers of borrowing and taxation are the

principal factors to be considered in connection with the security of municipal bonds.

States have found it wise from experience to limit by constitutional or statutory provision both the taxing and the borrowing power of municipalities and other bodies politic. The State Constitution of New York, for example, restricts county and municipal borrowing to an amount not in excess of 10% of the assessed valuation. This limitation, however, does not apply to indebtedness incurred on account of income producing improvements, such as water-works, docks, subways, etc., or to loan scrip issued in anticipation of tax receipts. If such provisions are merely on the statute books and not in the state constitution, they should be closely watched by investors and students of bond values, since they are very easily changed.

The case of Arkansas is interesting in this respect. The constitution has a provision prohibiting municipalities from issuing any securities whatever. The cities and towns, however, are enabled to evade the prohibition by being organized into debt districts which are by statute permitted to borrow. Moreover, additional borrowing beyond the statutory debt limited may be accomplished through the creation of separately chartered public corporations having the same boundaries and administered by the same officers as an existing municipality.

Legal Provisions Relating to Issues.—In view of the fact that municipalities can be sued and their debt contracts are enforceable in the courts, it is very necessary to know the legal provisions under which municipal and other civil loans are issued if investments in the securities are to be safe. To be valid obligations the loans must be issued in accordance with these provisions, which may be contained in state constitutions, general statutes, or in municipal and local ordinances applying directly to the loan. Certain attorneys specialize in furnishing opinions on the legality of municipal bond issues, and no issue should be placed on the market without procuring a reliable

opinion as to its validity. The attorneys carefully study and interpret the data upon which they base their opinions. An example of such an opinion follows:

CALDWELL AND MASSLICH

115 Broadway

New York City

New York, June 2, 1919

Dear Sirs:

We have examined certified copies of the legal proceedings and other proofs submitted to us relative to the issuance and sale of

\$40,000

CITY OF BUFFALO, N. Y.
Bridge Construction Bonds

Dated June 2, 1919

Maturing \$2,000 on June 2 of each of years 1920 to 1939 inclusive. Principal and semi-annual interest (June 2 and December 2) at 4½% per annum, payable at the office of the Commissioner of Finance and Accounts of the City of Buffalo or at the Hanover National Bank of the City of New York, at the holder's option.

We have also examined one of said bonds as executed (Bond No. D-2412).

We are of the opinion that such proceedings and proofs show lawful authority for the issuance and sale of said bonds pursuant to Chapter 217 of the Laws of 1914 of the State of New York, and acts amendatory thereof, being the Charter of the City of Buffalo, and other provisions of law applicable thereto, and that said bonds are binding and valid obligations of said city.

Respectively yours,

(Signed) CALDWELL AND MASSLICH

CITY AND COUNTY OF NEW YORK }
STATE OF NEW YORK } ss:

I hereby certify that I have compared the foregoing with the original opinion of Caldwell and Masslich dated June 2, 1919, and that said copy is true and complete copy of the whole and every part of the said original opinion.

(Signed) FREDERICK C. MOLLER
(Notary Public)

Bonds Issued Below Par.—As an illustration of how investors in municipal bonds may experience trouble because of the failure of the city to comply in every detail with the legal requirements connected with their issue and sale, an instance in the State of Washington may be taken. The city of Centralia issued some bonds that were sold at a discount to the highest bidder, *i.e.*, below 100% of their face value. It happened that the state had, as it still has, a law requiring municipalities to sell their bonds at par or better. Five years after

their issue, the Accounting Commission of the state discovered that the bonds had been sold at a discount, and the city officials were summoned to court for the purpose of invalidating the issue. A lower court of the state, however, held that inasmuch as the bonds were already in the hands of innocent holders, they were valid, but the City of Centralia could and should obtain the amount of the discount from the bondholders who presented them for payment at maturity. In other words, the city was to recover the loss by deducting from the principal the amount of the discount. In other similar cases, courts at times have held that the bonds were not valid obligations and need not be paid.

“Caveat Emptor.”—In commercial transactions the legal principle known as “caveat emptor” prevails generally, which translated literally means “let the purchaser beware.” These words signify that the buyer can have no redress for errors committed in good faith and without any attempt to defraud. Accordingly, the bond purchaser should be assured by competent and reliable authority that the legal provisions relating to an issue of municipal and other civil bonds have been fully complied with. In applying the principle of “caveat emptor” to municipal bonds the courts have been quite lenient to bondholders, holding in many decisions that when the bonds passed to the hands of innocent holders, even though the legal provisions were not complied with, they became valid obligations of the municipality. Moreover, states and municipalities in order to maintain their credit sometimes have validated outstanding issues which have been judicially declared as not having been issued in compliance with the law.

To assist investors in making safe investments in municipal bonds, trust companies and other financial organizations have taken on the function of registering and certifying authenticity of the bonds. The United States Mortgage and Trust Company of New York makes a specialty of this service.

The certification, however, is not conclusive. It merely signifies that the signatures attached to the bond and the certificate itself are genuine. In order to avoid forgeries of bonds, municipalities, like private corporations, generally have trust companies or other agencies register the bonds and act as transfer agents.

The Bond Recitals.—A municipal bond commonly bears upon its face a reference to the statute and ordinances authorizing the obligation and a recital to the effect that all the conditions, acts and things required by the constitution and statutes of the states “to exist, to have happened and to have been performed precedent to and in the issuance” have happened and have been performed, and that the indebtedness of the municipality, including the issue of which the bond is a part, is within every debt and other limit prescribed by the constitution and laws of the state. An example of such a “recital” follows:

It is hereby certified and recited that all acts, conditions and things required to be done, precedent to and in the issuance of this bond, have been properly done, happened and been performed in the regular and due form as required by law; and that the total indebtedness of said Board of Education, including this bond and the series of which it forms a part, does not exceed any constitutional or statutory limitation; and that due provision has been made for the collection of an annual tax sufficient to pay the interest on this bond as it falls due and also to constitute a sinking fund for the payment of the principal hereof at maturity.

When properly signed and certified, this recital is valid when the bonds are in the hands of a bona fide holder even though the provisions of law and the acts recited to have been performed have not been carried out. As stated by Judge Dillon:

If a municipal corporation, having general authority to issue bonds for specified purposes, puts forth a negotiable municipal bond issued for a lawful purpose, and therein recites, through its duly authorized officials, whose province and duty it is to ascertain and peculiarly to know the facts, compliance with the specific provisions of the law essential to the issuance of the bond, the

municipality is, as against a bona fide holder of the bond, purchasing for value, and on faith of the recitals, estopped to deny the truthfulness of the recitals.²

It should be borne in mind that the foregoing rule applies only when the bonds are in the hands of "holders in due course" for value, *i.e.*, investors and others who have not purchased the obligations directly from the debtor municipality, but who have obtained them from others through a bona fide transfer for value. This is in line with the negotiable instruments law of most of the states, which provides no defense to a suit for payment of a negotiable instrument that is valid in its inception when it is in the hands of one who has acquired it before maturity for value and without notice of any defects (*i.e.*, without recourse). The protection afforded a bondholder under this provision, it should be borne in mind, is limited only to negotiable obligations that *are valid at their inception*. In other words, should obligations have been issued without proper legal authority or in excess of prescribed amounts or contrary to any legal or constitutional provisions, they have no validity unless they have been validated subsequent to issue by a legislative act.

That the courts are not disposed to declare municipal bond issues to be void on account of inaccurate recitals which do not go to the substance of things is shown by reference to Supreme Court decisions. In the case of *Board of Education v. Dekay*,³ the validity of school bonds was questioned because they recited issuance under authority of "An Act to Organize Cities," etc., when the citation should have been to an "An Act to Incorporate Cities," etc. The Supreme Court held:

This is trifling. . . . An error in copying into an instrument a single word in the title of a statute does not vitiate the deliberate acts of the proper officers of a municipality as expressed in the promise to pay which they have issued for money borrowed.

² This is known as "Dillon's Estoppel Clause."

³ 148 U. S. 591.

In the same decision, it was held that even though a city and a school district were distinct corporations, bonds issued in the name of the city were not invalid as misreciting the name of the true obligor, when,

It is clear that the school district and the city were coterminous; that, by the act of 1868, the Board of Education were authorized to borrow on the credit of the school property, with the consent of the city council, and to issue bonds in payment thereof.

In the case of *D'Esterre v. City of New York*,⁴ the United States Circuit Court of Appeals, Second Circuit, said:

A recital is valuable as affording the basis of an estoppel when it is alleged by the municipality that conditions precedent to the exercise of the power of creating bonds, prescribed by statute, have not been complied with, but otherwise it is of no significance.

The Economic Basis of Municipal Borrowing.—(1) **TAXABLE VALUE OF PROPERTY.** The chief sources of income of municipalities and other political subdivisions of the states is the taxable property within the boundaries of each. The value placed upon such property for taxation purposes is known as the "assessed valuation." This appraisal is frequently a matter of guess work or computation on the part of local officials. Local assessors in most states are petty elected officers, whose duties are of a temporary nature and whose pay is comparatively poor. As local officials, they are primarily influenced (a) by the relative need for revenue of their community, and (b) by the desire to keep the general valuations low to reduce proportionally the tax levies of the larger political subdivisions, *i.e.*, the county and the state, which are made on the basis of the local appraisals.

In order to eliminate disparities as between communities and political subdivisions, most of the states have established both state and county boards of equalization, whose duty is to

⁴ 104 Fed. 605.

equalize the basis of assessment within their respective jurisdictions. The work of these state commissions on the whole has produced excellent results, particularly in determining the relationship between assessed value and real value, but little has yet been accomplished in bringing about a uniform and universally satisfactory basis of appraisal. Accordingly, the figures of assessed valuation, as commonly published in municipal bond circulars and financial manuals, should not be accepted without consideration of the basis of assessment and other local conditions which influence the appraisal.

The figures of assessed valuation, whatever their basis may be, are universally employed by the state in placing a legal limit on the debt creation of their political subdivisions. Thus, New York limits by constitution provision the debt of cities and counties to 10% of the assessed valuation. Villages are also limited to 10% by a law passed in 1909,⁵ but towns are apparently without such legislative restriction. Massachusetts in 1913 placed a general limit on cities to 2½% and towns to 3%, but additional debt within certain specified limits may be incurred for special purposes, such as for acquiring public utilities, playgrounds and the like. Almost all states exclude from the debt limitation obligations issued or outstanding for water works or other self-supporting activities. Inasmuch as local valuations of taxable property can in many cases be raised merely for the purpose of affording greater borrowing capacity, the statutory restrictions may act as a deterrent but not a preventive against excessive municipal debt. The laws of several states (*e.g.*, New York, Massachusetts, New Jersey) respecting investments by savings banks and trust funds in municipal securities are also based on the ratio of the debt to assessed valuation. However, as state banking officials are given some discretion in judging the validity of the reported amounts of both debt and the value of taxable property, the

⁵ See Section 130 of Chapter 64, New York Laws of 1909, amended by Chapter 139, Laws of 1923.

limitations imposed by the banking laws are more effective in their application than the state statutes limiting the amount of local indebtedness.

(2) THE TAX RATE is closely related to the problem of assessed valuation. In most states, the municipalities are limited to a legal maximum ad valorem tax rate levied on property. When a tax rate at or near the maximum prevails, the natural tendency of local assessors is to increase the basis of the assessment. On the other hand, when local expenditures warrant a lower tax rate, the rate may be purposely kept high and the assessed valuation lowered in order to reduce the actual payments that the local taxpayers are called upon to make to the state or to some other taxing district. It was to avoid this subterfuge that in 1910 the Legislature of Ohio enacted the so-called Smith 1% Tax Law, which limited the tax rate of cities in the state to 1% of the assessed valuation. Alabama also for a number of years prior to 1919 limited severely the tax rate of its municipalities, thereby causing a pronounced impairment of their credit.

Another factor influencing the tax rate of municipalities is the relative amount of personalty included in the tax levies. The modern tendency in large cities and in the well settled sections of the country is to place a larger proportion of the tax burden on real property and to depend less on the taxation of personalty. Thus, New York City, which in 1897, appraised personalty subject to taxation at \$419,679,385, in 1924 reported but \$231,174,150, or about half the amount. In the meantime, however, realty valuation had multiplied four-fold. The total equalized assessed valuation of taxable property in the state of New York in 1923 was reported by the Tax Commission as \$16,223,729,387, of which personalty was but \$228,695,426, or slightly less than 1½%. This compares with about 4% a decade previously. According to the latest United States Census figures, Massachusetts, with a total of \$5,015,030,578 subject to general property tax, valued personal prop-

erty at but \$852,555,128. Texas, on the other hand, in the same year, reported a total of \$3,390,953,149 subject to the general property tax, and personalty at \$944,468,788, or about 28% compared with but 17% in Massachusetts.⁶ It is accord-

COMPARISON OF COMMISSION TAX RATES FOR CITY PURPOSES ON
REAL AND PERSONAL PROPERTY

(Occupation and Occasionally Poll Taxes are Levied in Addition)

	Cedar Rapids	Des Moines	Dallas	Fort Worth	Galveston
Tax rate for city purposes, exclu- sive of schools.....	3.99	3.71	1.50	1.75	1.67
Present basis of valuation:					
a—Law requirement.....	100%	100%			
b—Practice.....	75%	80%	60%	66⅔%	66⅔%
Percentage of valuation assessed..	25%	25%	100%	100%	100%
Percentage of market value ass'd.	18.75%	20%	60%	66⅔%	66⅔%
Tax rate for city purposes re- duced to uniform basis of 100% valuation and 100% as- sessment.....	.748	.742	.90	1.16	1.12
	Houston	Hunting- ton	Kansas City	Topeka	Wichita
Tax rate for city purposes, exclu- sive of schools.....	1.31	0.57	0.915	0.80	0.68
Present basis of valuation:					
a—Law requirement.....	100%	100%	100%	100%	100%
b—Practice.....	40% (average)	85%	89%	90%	100%
Percentage of valuation assessed..	100%	100%	100%	100%	100%
Percentage of market value ass'd.	40% (average)	85%	89%	90%	100%
Tax rate for city purposes re- duced to uniform basis of 100% valuation and 100% as- sessment.....	.52	.48	.81	.72	.68

ingly apparent that in the southern and western states where the need of revenue in relation to property values is more intense than in the well-settled eastern sections, that personalty bears a larger share of the tax burden.

In view of the disparities in methods of appraising prop-

⁶ See *Financial Statistics of States*, published by the U. S. Census Bureau.

erty values for taxation purposes, together with the varying methods of applying the tax rate to the assessed values, the *actual* tax rate in many cases differs widely from the *nominal* rate. It is for this reason that a municipality with an apparently high tax rate may be taxing its citizens less than another with a *nominally* low rate. A study bearing on this point was made several years ago by Mr. Bruere in his book on City Commission Governments. Of the ten cities listed in the accompanying table, the nominally high tax rate of Cedar Rapids of \$3.99 is in comparison with the other cities among the lowest in the group. This is largely because at that time cities in Iowa were required to base the rate on but one-fourth of assessed value.

Tax rates of municipalities are to a minor degree affected by the available revenues supplementary to a general property levy. A number of cities in the different states have incidental sources of revenue that tend to relieve the burden on property values. Income from water systems, and other public utilities, rentals of docks, markets and other privileges, special license taxes, etc., all go toward meeting governmental costs. These revenues, however, will in the long run, not reduce the tax rate unless the receipts are sufficient to cover all expenses in connection therewith, including the interest on, and amortization of, the debt or capital outlay. Up to the present, few municipalities have shown clear net profit from the operation of utilities, and in a number of cases, as for example, the subways and ferries of New York City, actual financial loss has been incurred.⁷ Owing to the unsatisfactory methods of municipal accounting, it has been exceedingly difficult to determine the profitableness or unprofitableness of what the British call "municipal trading."

A still further element influencing municipal tax rates is the relation between local and state taxation. The common

⁷ These losses, however, may have been more than offset by the increase in assessed valuation arising from rise in real estate values as a result of the extension of public services.

practice of American states has been to levy state taxes independently of the local levies, but on the basis of the local assessed values. Several of the states, however, apportion a part of the state revenues to its municipalities or other bodies politic. This is the case in Wisconsin, New York, Minnesota, and Iowa, in which the state authorities collect taxes directly from certain corporations, such as railroads and utilities, etc., and reapportion a part thereof to the communities. Wisconsin and New York also levy state income taxes, a part of which is returned to the municipalities. If these payments are substantial, they may effect a noticeable reduction in the tax rate.

Another factor to be considered in an analysis of tax rates, outstanding debts and assessed valuations, is the number of overlapping or coinciding taxing jurisdictions covering the same territory. Thus, the normal tax rate of the City of New York is much higher than that of Chicago. The City of New York, however, out of its own revenues supports the counties within its borders and bears the costs of the schools, the parks and the sanitation system. These expenses the municipality of Chicago escapes because the separately incorporated taxing districts bear these costs. In addition to levying their own taxes, these superimposed municipal entities have their own debts, so that a comparison of the ratio of New York's debt to that of the City of Chicago would be inaccurate and deceptive unless the debt of Cook County, together with the Chicago Drainage District, the Chicago School District, the park districts, and other separately incorporated taxing authorities in Chicago's territory were included.

REFERENCES

- ABBOTT, H. S. *Treatise on the Law of Public Securities*. Chicago, Callaghan & Co., 1913, 1,280p.
- BROWN, FRAZER. *Municipal Bonds*. New York, Prentis-Hall, Inc., 1923, 231p.
- CHAMBERLAIN, LAWRENCE. *Principles of Bond Investment*. New York, Henry Holt & Co., 1911, 551p.

- DILLON, JOHN F. *Commentaries on the Law of Municipal Corporations*. Boston, Little, Brown & Co., 1911, 5 vols., 5th ed. (The standard legal authority.)
- LUTZ, H. L. *Public Finance*. New York, D. Appleton & Co., 1924, 681p.
- PLEHN, CARL C. *Introduction to Public Finance*. New York, Macmillan Co., 1921, 445p.
- NATIONAL TAX ASSOCIATION. *Annual Reports of Proceedings*.
- RAYMOND, WM. LEE. *State and Municipal Bonds*. Financial Publishing Co., 1922.

CHAPTER XIX

MUNICIPAL BOND ANALYSIS

POLITICAL STATUS OF DEBTOR

Legal Character and Credit Standing.—As already pointed out on page 221, the political character of the issuing political unit is immaterial as affecting the legal nature or financial standing of their obligations. The economic factors in relation to each group are of considerably more importance. In other words, it is of small consequence to an investor whether he holds an obligation of a county which has never been formally chartered as a public corporation, or of a metropolis which has received a legislative grant of powers and privileges sanctioned by the majority vote of its citizens. In both cases, he holds a promise to pay of a public corporation legally responsible for its duly authorized liabilities, and which can be sued in a court of competent jurisdiction. As with business concerns, however, the leading factor in the credit standing of public corporations of every character are the financial resources and the honesty and efficiency record of the debtor. Accordingly, it is misleading to grade the investment qualities of municipal obligations in general on the basis of the political status of the obligor.

County Bonds.—There is a wide range in the quality of county bonds. In the New England states, counties, though functionally restricted largely to judicial administration, are supervised closely by the state governments, and their obligations are accordingly of a high investment character. In the agricultural states of the South, the governmental activities of the counties are broader and more intensified than in the in-

dustrial states of the north, with the consequence that southern states county bonds rank higher than those of their smaller cities and special districts. In the sparsely populated western agricultural states, where county government has not been developed to the same extent as on the Atlantic Seaboard, and where the county's economic functions have been restricted, ramshackle county administration has been most pronounced. The credit of many of these counties has not as high standing as that of the cities and towns in the same region.

As an aid to the analysis of their bonds, counties may be separated into four groups, *viz.*: (1) metropolitan counties, (2) urban counties; (3) suburban counties, and (4) rural counties.

Metropolitan counties are relatively few in number. They comprise those whose geographical area is largely covered by an important metropolitan city. The four counties of Greater New York, the two counties of Boston and suburbs, Cook County in Illinois (comprising Chicago) Allegheny County (comprising Pittsburgh), and St. Louis County, are within this class. *Urban counties*, though in many instances difficult clearly to separate from metropolitan counties, may be said to comprise such as have within their territory one or more cities, the combined population of which exceeds the number of the rest of the inhabitants within the county. Onondaga and Monroe Counties, New York are examples. The former has Syracuse and the latter the city of Rochester within their respective borders. Cuyahoga County which takes in the City of Cleveland, and Fulton County, Georgia, the seat of which is Atlanta are other counties of this type. With the growth of residential communities around great cities, *suburban counties* are becoming increasingly numerous. Examples of these are Nassau and Suffolk Counties on Long Island, Westchester County lying north of the city of New York; Bergen County in New Jersey, Baltimore County in

Maryland which borders on the City of Baltimore and Montgomery County, Maryland, adjacent to the District of Columbia. The land values and other taxable resources of these counties are naturally the result of proximity to large centers of population. The *rural* group comprises the bulk of the counties in the southern and western regions. There are, however, a number in the northern states, such, for example, as Warren and Essex Counties in New York, Pike County in Pennsylvania, and Sussex County, New Jersey. The distinguishing feature of rural counties is the predominance of the rural population, and the absence of a population center that can be properly called a city.

As a general rule, it may be stated that the larger the urban or suburban population of a county, the greater will be its material resources, and, as a logical sequence, the greater its taxation ability. Industrial and residential land values are much greater relatively than agricultural land values. Moreover, it is a well demonstrated fact that the percentage of the assessed values to the market value is higher in towns than in the agricultural sections. To all this should be added the more efficient financial administration and supervision in urban counties. County government, as a whole, in the United States, has been lax, and the record of maladministration, waste, defaults and repudiations in the rural far exceeds that of the urban counties.¹

In several urban counties, the cities and towns collect the county taxes as a part of the local levy, thus assuring a greater certainty of county revenues. On the other hand, counties in some states levy the township taxes, and in this way are not deprived through local tax manœuvering of a proper share of the public revenue. The expense of county government in the City of New York is borne directly by the

¹ For examples, see Chamberlain, *The Principles of Bond Investment*. See also "The County a Neglected Factor in American Government" published in the *Annals of the American Academy*. Also a pamphlet entitled "Ramshackle County Government" published by The National Municipal League.

municipality. Boston also receives into its treasury all the income of Suffolk County (which contains besides Boston the cities of Chelsea and Revere), and pays all the county expenses. In both instances, the county debts have been assumed by the city government. As the City of Philadelphia is co-extensive with the county, the county is under city control and has no separate debt.

It should not be understood that all rural counties have inferior credit standing. Many of these because of the mineral and agricultural wealth within their boundaries, possess ample revenue resources. Moreover, rural counties may be fortunate in being traversed by expensive railroads or contain large hydro-electric and other public utility properties, the taxable values of which furnish a source of income wherever the counties are permitted to tax these directly. The taxation of mining properties and mineral and timber lands may also be an element of financial strength. All these matters require investigation on the part of the careful investor. Bond circulars advertising county bonds rarely fail to mention these facts, since they are strong selling points in the distribution of municipal securities.

City, Town and Village Bonds.—From the viewpoint of municipal finance, cities, towns and villages differ from one another only in size. As pointed out on page 221, they are in most cases politically distinguished from county and township in being voluntary corporations created on petition of, or with the sanction of the inhabitants. This distinction, however, has no financial significance; neither should the designation “city,” “town,” or “village” have any influence in grading or ranking municipal obligations. The states of the Union follow no definite specifications that distinguish cities from towns or towns from villages, and even in the same state, municipalities are chartered as cities, which from the standpoint of population, are smaller in size than many

of the towns or even villages. Thus, the Village of Peekskill in New York has a population in excess of 16,000, whereas Oneida, New York, incorporated as a city in 1901 has about 10,000 inhabitants. In the western states, municipalities designated as cities are in many cases less in population than the minor villages of the East.²

As the creation of municipalities by state charters is generally based primarily upon population, and not upon area, cities, towns and villages almost always form a part of another political subdivision, toward the support of which its property owners and inhabitants must contribute. It is these larger political subdivisions, as well as co-extensive and overlapping municipal corporations which complicate the accurate measurement of the relation of net debt to size, wealth and taxable resources. No better illustration could be furnished of this than a comparison of the wealth, debt and taxation of the cities of Chicago and New York. Aside from its contribution to the state's revenues, New York City's assessed valuation, its tax rate and its debt are all its own. It has merged the county organization in its own government; it has no separately incorporated "school district" or any other specialized public corporation within its borders which has equal taxing and debt-creating powers with the municipality. In addition, it maintains docks and other public works which, in a number of states, are owned and conducted by state governments or by specially created districts. The City of Chicago, on the other hand, submits to the taxing power of its county and it ratably contributes to the service the county debt. The inhabitants, moreover, support separate school and park districts possessing taxing and debt creating powers. The city is within a sanitary district, a road district and a forest reserve

² The United States Census in its investigations of local public finance, fixes the minimum population of a city as 30,000. As the creation of cities is usually by petition of the inhabitants, these are naturally not disposed to request incorporation unless there are political or economic advantages in having a city charter.

district. Altogether, there are seven different general property tax levies in Chicago, and corresponding kinds of local taxes are borne by the people of Chicago, which are combined in the general property tax levied in the City of New York.

Additional Investment Factors.—Aside from the considerations of size and of co-extensive and overlapping political subdivisions, important favorable factors in gauging city credit are :

1. The elements promoting permanency and growth as a population center, such for example, as favorable geographical location, transportation facilities, commercial and industrial development, etc.
2. The assessed value of property in relation to the real value, the tax rate and the net debt, together with the incidental and collateral revenue resources of the city government.
3. The successful operation of utilities and other public property.
4. Absence of severe legal restrictions on taxing and borrowing.
5. Administrative honesty and efficiency.

Each of these will be considered in turn.

1. The permanency and growth of large centers of population in America and Europe are among the most distinctive phenomena of modern times. The localization and concentration of industrial production, the constant improvement in transportation facilities, and the long distance transmission of power seem to point to a continuation of city growth. There is, however, a severe regional commercial and industrial competition which retards the growth or reduces the importance of some population centers to the advantage of others. Thus, the City of Cincinnati, following the Civil War, was unable to keep pace with the growth of other industrial centers in the

same region because of the decline in river traffic and the lack of adequate railroad connections. In order to overcome the handicap, the city built at its own expense, and through the sale of bonds, the Cincinnati Southern Railroad. Other cities have had to expend large sums in the creation of port facilities in order to compete successfully with commercial rivals in attracting trade. As the cost of these improvements is generally met through bond issues, the creation of debt for such purposes involves much the same investment risk as the application of capital funds to the expansion of business concerns.

2. The assessed value of taxable property in relation to the debt of municipalities is the most widely used medium for analyzing municipal credit. The effectiveness of these factors has already been discussed in the previous pages. It may bear repetition here, however, to again point out that the figures of assessed valuation, gross and net indebtedness, tax rates, etc., require most careful sifting. In every case, inquiry should be made regarding the basis of valuation (*i. e.*, its proportion to real value); the number of co-extensive and overlapping political subdivisions, which also levy taxes on the assessed valuation; the actual tax rate as distinguished from the nominal rate (see page 233) and the amount, purpose and nature of the outstanding obligations, together with sinking funds and other provisions for debt amortization.

3. With the intensification of municipal activities, a large part of outstanding municipal obligations have been created for acquiring and operating public utilities. All this to some degree involves municipal bondholders in the risks and uncertainties which are present in private business undertakings. However, utilities are frequently essential to municipal growth, and when private enterprise is unwilling or incapable of performing the services adequately, the municipality may be justified in applying its credit to this purpose. The failure

to earn a direct income from this source is not always an indication of unsuccessful public operation, particularly when the utility furnishes a means of maintaining or increasing taxable property values. On the other hand, heavy indebtedness incurred for the construction of utilities which cause large losses in operation and which could be conducted more efficiently under private ownership is a factor of credit impairment that should not be overlooked.

4. Taxation is a legislative function delegated to municipalities by the states. The latter, by constitutional provision or by statute can limit the taxing power in every detail, and the judicial branch of the government cannot override or alter these limitations if not contrary to the Federal Constitutional provision denying the right of states to impair the obligation of a contract. Accordingly, a severe limitation on municipal taxing power by restricting revenues available for the payment of interest and the amortization of principal of obligations has the same adverse effect on municipal credit as earnings losses have on the securities of business concerns. Although a maximum municipal tax rate at times may be overcome by arbitrary increases in assessed valuation of taxable property, an approach toward the maximum rate of tax levy is a danger signal to bondholders. The straight-jacket Ohio tax laws is a case in point. The inability of Ohio cities to increase their levies beyond the prescribed maximum rate on assessed valuation led several important Ohio municipalities into a condition of insolvency. According to a computation of the Ohio Institute, of Columbus, Ohio, forty-eight out of eighty cities in Ohio in 1924 spent more to meet debt charges than for operating costs, notwithstanding that the yearly net addition to municipal bonds of each city is limited to $\frac{1}{2}$ of 1% of the total duplicate valuation limit set by the state law. Although staying inside this margin, Ohio cities incur debt charges which cut into current income, thus reducing the amount available for operating expenses, since

both debt charge and expense, except where a supplemental tax levy has been authorized, must come out of the maximum 1% tax rate that had been set by the state legislation.³

5. Contrary to the general belief, political corruption and inefficiency or dishonesty in administration have had less influence on municipal credit than the other factors enumerated above. The uninterrupted payment of obligations by New York City during the Boss Tweed domination, and the financial integrity of Philadelphia under boss rule are illustrations of the maintenance of fairly sound municipal credit with rank corruption in government. The probable explanation lies in the tremendous resources of cities in which graft and other adverse political conditions have prevailed. When municipalities are growing rapidly and adequate revenue resources prevail corruption is likely to gain greater headway than in cities and towns of slow growth and settled conditions. Moreover, corruption, graft and extravagance in municipal affairs are temporary situations, readily overcome through public opinion voiced at the polls and through checks prescribed by state legislation.

Special District Bonds.—Special districts, as public corporations, have one distinguishing feature. They are created for a single governmental purpose only. The variety of these purposes have been increasing. Today, there are hundreds of millions of bonds of drainage, irrigation, port, bridge, road, fire, water, sea-wall and bulkhead, sewage, lighting and other improvement districts outstanding, as well as the older and more common forms, such as school and road districts. These districts, for purpose of bond analysis, may be separated into two groups: (1) those that are permanent in character, and created for a specialized administrative purpose, and (2) those that are more or less temporary, and created to provide

³ The portion of the municipal tax dollar available for operating purposes in 1924 in the larger Ohio cities, were Akron, 51%; Cincinnati, 56.4%; Cleveland, 60.1%; Columbus, 55.4%; Dayton, 40.3%; Hamilton, 33.6%; Lima, 21.6%; Toledo, 51.9% and Youngstown 25%.

and maintain a public improvement. The most numerous of the first class are the school districts. These, in some cases, administer the public schools in the largest cities. Philadelphia, Cleveland, Kansas City, St. Louis, and Los Angeles are a few of the large municipalities which conduct public education through separately incorporated public bodies politic. In rural sections, the school districts are among the most important of the debt creating municipal corporations. Some are limited in territory to a township or less. Others are organized on the county unit basis, comprising all the schools in the county's territory. Based on investment experience, school district bonds have a high rating, due undoubtedly to the fact that education is universally regarded as an essential function of local government.

Irrigation, drainage, levee and similar districts, are among the prominent examples of public corporations created for the provision or maintenance of specific improvements. They vary in size from a section of township or other small municipality to areas comprising several counties. Thus, as already pointed out, the Miami Conservancy District in Ohio comprises a territory of about 265 square miles, including several large and important industrial cities. The project consists of a system of reservoir control and channel improvement of the Miami River and other streams by means of which the water supply is conserved and protection is afforded against floods. The Pueblo, Colorado, Conservancy District is of similar character. The Moffat Tunnel Improvement District of Colorado is a recent special district creation. This includes the entire City of Denver, and all or portions of the eight adjoining counties. The district was created for the construction of a six-mile tunnel through the Continental Divide, to be used for railroads, telegraphs, power transmission lines, and other public purposes. In a number of instances, large improvement districts are administered by state officials.

These, to all intents and purposes, are state enterprises, but their incorporation as a political subdivision relieves the state of the direct liability for their obligations.⁴

When special districts are created for a general governmental function, such as the maintenance of schools or of fire protection, they are supported, and their obligations are secured, by tax levies in the same manner as counties, cities, towns and other ordinary political subdivisions of a state. Accordingly, the school district bond, payable out of general school tax in the district, is as completely enforceable as a bond of a city covering the same territory. On the other hand, a road improvement or drainage district bond issued to cover the cost of a special improvement, where assessments, levied according to the benefits received by property holders and payable in installments are levied in the district (and there is no further recourse or liability to re-assessment or to a general tax for deficiencies) is essentially an assessment bond. It is a direct obligation of the district, but the provision made for its payment is confined to a limited fund. Unless there is a general tax or a power to make successive levies to assure the payment of bonds, the holders have no recourse in the event that the revenues from the assessment levies are insufficient for this purpose.

Between these two extremes, *viz.*: (1) a district bond secured by special assessments and (2) one secured by a general taxing power, there are many kinds of district obligations. If the taxing power is substantially general and practically unlimited as affecting the payment and enforceability of the bonds, it is a general obligation of the district, theoretically as enforceable as any municipal obligation. The fact that it is a district obligation distinguishes it only in name from

⁴ The Everglades Drainage District in Florida is an example of the creation and maintenance of a state enterprise through the organization of a special district. As the State Government of Florida is prohibited by its constitution from issuing bonds, it has been enabled to borrow for its drainage work through the sale of the district obligations.

the ordinary municipal obligation. It is immaterial as affecting enforceability whether the revenues applicable to the payment of obligations be in the form or name of a general tax, or of a special tax or assessment, if in fact the levy is general over the district and practically unlimited in its relation to the amount necessary to meet in full the payments required.

When the obligations of a special district created to provide a public improvement rest solely on the enforceability and the lien of special assessments against the property holders benefited by the improvements, and levied to an aggregate amount sufficient only to cover the costs thereof, the holders of such bonds are in the same position of real estate mortgage owners, whose loans are only equal to or in excess of the value of the liens. If unfavorable conditions arise whereby property values are reduced; or should the proposed improvement fail to increase the land values proportionately to its cost, investment losses are likely to occur. This has been a common experience of many irrigation and drainage enterprises conducted by public authority. On the other hand, when the power of levying assessments to cover the cost of the improvement (including the interest on obligations) is supplemented by a general taxing power, not different from that granted to ordinary municipal corporations, the special district obligations have a double security, *viz.*, (1) a primary tax lien in the form of a special assessment levied on property owners, in accordance with the benefits derived, and (2) a general *ad valorem* tax levied on all property within the district on the basis of an appraised valuation. The most recent issues of special districts, such as that of the Moffat Tunnel District, have this double security.

REFERENCES

Assessed Valuation and Tax Levies, 1922. Published by the Department of Commerce, Bureau of the Census, Washington, Government Printing Office, 1924, 150p.

- EGGLESTON, DEWITT C. *Municipal Accounting*. New York, Ronald Press Co., 456p.
- Financial Statistics of Cities, 1922*. Department of Commerce, Bureau of the Census, Washington, 1924, 305p.
- JAMES, HERMAN G. *Local Government in the United States*. New York, D. Appleton & Co., 1921, 482p.
- MUNRO, WILLIAM B. *Municipal Government and Administration*. New York, The Macmillan Co., 1923, 2 vols., 459 and 513p.
- NATIONAL TAX ASSOCIATION. *Annual Reports*.
- PORTER, K. H., *County and Township Government in the United States*, New York, Macmillan Co., 1922, 362p.

CHAPTER XX

MUNICIPAL BOND ANALYSIS

THE CHARACTER OF THE OBLIGATION

Purpose of Issue and Term of Bonds.—A prime investment factor in any issue of municipal bonds is the purpose for which the debt is contracted. An investor should carefully determine whether the improvements on property acquired through a bond issue has a period of usefulness beyond the maturity of the bonds. It has been quite common in the past for municipalities to issue bonds payable in thirty years or more to cover the cost of street paving which is likely to wear out in ten years. At the maturity of the bonds, the paving may have been renewed two or three times, and each time additional bonds may have been issued to cover the cost. The result is an accumulation of debt not represented by existing values. The generation that enjoys the full use of a public facility should pay for it, and the cost should not fall on the next generation. Bonds running for a period of fifty years or more are issued for the construction of schools which will wear out or become inadequate in twenty-five years or less. Municipal bonds should, therefore, be paid off before the property purchased with their proceeds loses its value. The Massachusetts and New York state constitutions, along with the laws or constitutions of other states, contain provisions which compel municipalities to observe this sound principle of debt contraction.

Massachusetts, which has taken the lead in establishing a sound system of municipal credit under its jurisdiction, imposes the following maximum maturities on municipal obligations :

1. Bonds issued for general purposes, 20 years.
2. Bonds issued for water supply, 30 years.
3. Bonds issued for gas and electric lighting, 20 years.
4. Bonds issued for playgrounds, 30 years.
5. Bonds issued for cancellation of current indebtedness or the restoration of trust funds, 15 years.

Debts for the purposes specified above must be made payable within the above periods from the date of the issue of the bonds.

New York's restrictions are not as specific as Massachusetts', but the state constitution provides that bonds issued for public utility purposes are not to extend beyond the expected life of the property acquired, and other loans are not to exceed a period of 50 years. Water bonds issued after a municipality has reached the statutory limit of indebtedness are restricted to a maximum maturity of 20 years. The limitations fixed by the New Jersey Municipal Bond Act are along the same lines. In addition to limiting bond maturities to within the probable life of the utilities for which they were authorized, the refunding of debt created for general purposes must be in bonds running less than 15 years, and for other refunding, a 20-year maximum maturity is imposed.

Ohio furnishes the best example of a scientific system of debt maturities. The state law as amended in 1923, provides as follows:

When issued for—

Class (a). The acquisition of real estate or easements or other interests in real estate, grade crossing elimination, and flood prevention, thirty years;

Class (b). The construction or improvement of fireproof buildings or other structures, widening of roads, highways, streets or alleys, general waterworks improvements, sanitary and storm sewers, sewage disposal works, and bridges, twenty-five years;

Class (c). The construction or improvement of non-fireproof

buildings or other structures, electric light plant and equipment, police and fire alarm telegraph systems, fifteen years;

Class (d). Waterworks meters, fire apparatus, road rollers, furniture and furnishings, machinery in garbage disposal plant, landscape planting, playground apparatus, sidewalks, curbs, gutters, and the construction, reconstruction, resurfacing, grading or drainage of roads, highways, streets, or alleys, or improvements thereof by boulevard or white-way lighting system, ten years;

Class (e). Motor vehicles other than fire apparatus, wagons and horses, bonds issued to pay judgments for personal injuries or other non-contractual obligations and also for defraying the expenses of an extraordinary epidemic of disease, five years;

Class (f). Lighting, sprinkling, sweeping or cleaning of streets or other public places or other service for which municipal corporations or other political subdivisions are authorized by law to levy special assessments, one year;

Class (g). Purposes not included in the foregoing clauses, such number of years not exceeding thirty as is the estimated period of usefulness of the asset, improvement, or other purpose, such estimate to be made by the fiscal officer;

Class (h). A single bond issue for a purpose which includes two or more of the foregoing classes, the average number of years of usefulness as measured by the weighted average of the amounts proposed to be expended for said several classes in accordance with the above table of maturities; such estimating and calculation of average to be made by the fiscal officer.

In endeavoring to restrain the debt accumulations of their municipalities, several states have taken what in some cases may be considered unduly severe measures against long maturities. Vermont places a limit of 20 years on all debt, except that created for acquiring or developing municipal forests, which may run as long as 60 years. New Hampshire also has a 20-year limitation on maturities. Mississippi makes 25 years, and Tennessee and Washington 30 years, the maximum limit for all issues. California, on the other hand, permits the City and County of San Francisco, together with the City of San José and the Town of Santa Clara to incur debts that may run as long as 75 years.

Methods of Repayment.—The periods of maturity of municipal bonds is in most instances not as important a feature as the methods of repayment. When securities are issued for permanent improvements or for productive and revenue purposes, the problem of repayment is a negligible one, since maturing issues may be readily refunded. However, as has already been pointed out, unless provision is made in advance for amortization or repayment of the obligations before maturity, there is generally grave danger of excessive accumulation of debt with resulting heavy burdens of interest payments. It is for this reason that during the last 50 years, most American states and municipalities make provision at time of debt creation for the means of its repayment.

As it is difficult, if not almost impossible for governments as well as business concerns to acquire cash with which to pay off large bond issues at time of maturity except by refunding, the practice prevails of amortizing the obligations gradually over a period of years. This may be done in two ways: (1) A sinking fund may be accumulated which will be sufficient to cancel the obligations when they fall due, or, (2) the maturities of the obligations may be arranged in series, the due date of each series differing from that of the others. The latter method is an instalment system of repayment, generally known as the serial method. The sinking fund method, however, can also be applied to debt repayment by instalments, when the periodical accumulations of the sinking fund are employed directly for the purchase and cancellation of outstanding bonds. This, as has already been pointed out, is a common method of debt amortization by European and South American governments. In order to be able to acquire the bonds for cancellation, it is frequently provided that if bonds cannot be obtained at or under a specified price, certain numbers selected by lot may be called for redemption.¹

¹ On a number of foreign government issues, redemption is provided for solely by periodically calling in bonds selected by drawings and at a specified "call price." This method is not applied to civil loans in the United States. It is also somewhat

Largely owing to the dislike of American investors to this method of debt redemption, together with its inadaptability to small issues of widely marketed securities, it has not been used to any appreciable extent by American municipalities. The leading objection to the sinking fund bonds is that the fund may be badly invested and otherwise mismanaged. That this has happened in numerous instances is well known. Experiences of the kind have been the leading motive in impelling most of the states of the Union to adopt the serial method of payment both for state and municipal obligations.

Sinking Fund Difficulties.—The difficulties experienced by municipalities with sinking funds are of two kinds: (1) the inability to invest the funds properly so that at maturity sufficient cash may be available for meeting maturing obligations and (2) the inaccurate or utter lack of computation of the periodical amounts required to be set aside for the purpose. When sinking fund provisions are adjusted so that the periodical appropriations together with the accruals of interest thereon, when reinvested at a predetermined rate, are just sufficient to meet the amount of the maturing debt the sinking fund is said to be on an actuarial basis. This is the method used by life insurance companies in setting up reserves to meet the claims of their policy holders. Relatively few American municipalities have followed this scientific method. New York City perhaps offers the best illustration of absurd sinking fund provisions for the retirement of part of its debt. In former years instead of appropriating fixed sums annually proportioned to the amount and the maturity date of bond issues, certain revenues of the city were allotted for this purpose. As the sinking fund provision is a part of the debt contract, the allotted revenues cannot be diverted, with the result that the sums accumulating in certain of the city's sinking funds are enormously excessive. This has created an

unusual for American municipalities to reserve to themselves the right of redemption in advance of maturity date.

anomaly of the city borrowing from its own sinking funds, since the city uses the surplus, by giving to the sinking fund commissioners new obligations equal to the amount thus abstracted.²

The conditions which defeat the proper accumulation of sinking funds are well illustrated by the experience of the city of Cleveland. According to the Cleveland Municipal Research Bureau the two chief causes of inadequate sinking fund provisions for the city's debt amortization were (1) delinquencies in the payment of general taxes, a part of which is allotted to the sinking fund, and (2) delinquencies in the payment of special assessments to reimburse the advances made through bond and note issues for public improvements. As stated in a report of the Municipal Research Bureau issued in 1922:

At the present time, in making up sinking fund levies, no allowance is made for the fact that some percentage of taxes levied for sinking fund purposes are delinquent for a period of years and of these delinquent taxes levied, some are never collected. The amount requested by the sinking fund commission each year is an actual and definite requirement in dollars and cents, necessary to pay interest and serial bonds, and to use as principal for investment purposes. Each year when the statement of requirements is made up it is premised upon prompt receipt of the full amount requested.

Now, for example, if an average of three per cent of the amount requested each year is delinquent for several years and receipts are on the average three per cent less each year than actuarial requirements, the net effect of such a condition is exactly the same as if the fund earned only one per cent instead of four per cent, when four per cent earning is the basis used in calculating requirements.

² The New York City bonds representing "the sinking fund takings" are known as General Fund Bonds. On January 1, 1924, these bonds which are not computed as a part of the city's outstanding debt, amounted to \$452,500,000. At the same time, the city had other bonds in its various sinking funds computed at \$232,797,501. Thus the total amount normally in the sinking funds aggregated approximately \$700,000,000 against outstanding funded obligations of all kinds of about \$1,373,350,000. Of the ten separate sinking funds maintained by Greater New York, at the end of 1922, Sinking Fund No. 1, to meet the maturity in 1929 of \$35,832,811 in bonds, was represented by \$35,000,000 in investments and \$376,500,000 in General Fund Bonds.

The other condition which tends to defeat the proper accumulation of the sinking fund is losses and delinquencies in the collection of special assessments for local improvements.

When property is assessed for the construction of a pavement or sewer, property owners are given five years in which to make their payments. The construction is financed by the issue of local improvement notes or bonds to be retired by the annual payments of assessments. When assessments are collected and remitted to the city, the money goes to the sinking fund to pay the interest on and to retire the notes and bonds as they fall due. At the close of 1921, the revenues from special assessments had fallen \$274,170.91 behind the payments on special assessment notes and interest. This means that the general sinking fund has been depleted by this amount because of delinquencies and losses in the collection of special assessments.³

The Serial Method.—The serial method has become popular only during the last quarter of a century. It was adopted in Massachusetts in 1913, and has since been followed in New Jersey, Louisiana, West Virginia, and several other states.

New York in 1920 adopted the serial payment plan for state issues. The law of several states, including Massachusetts and also New Jersey, provides that bond payments are to be equal annual instalments, beginning within a few years from date of issue. This requirement imposes a heavier burden of debt payment in the early years of the issue than in the later, since as the amount of bonds outstanding is reduced through the serial redemptions, the interest cost is proportionately lessened. This condition may be overcome by the substitution of the equal instalment for the annuity method. Under the latter plan, the amount of the redemptions at each successive period is increased in proportion as the required periodical interest payments are decreased. Thus, by the annuity method, both the principal and interest together are discharged by constant annual or semi-annual payments. The amount of each payment or instalment is determined by

³ A Report on the Community's Outstanding Debt, by the Municipal Research Bureau of Cleveland, June 1922.

the rate of interest and the term of the bond. However, it usually is necessary to subdivide the bond issue into individual bonds of \$100, \$500, or \$1,000 each, so that the resulting specific payment of principal and interest must vary slightly because of this adjustment. In the table below is shown the schedule of principal and interest repayments upon a loan of \$100,000 for 20 years, retired by this plan at 4% per annum. The necessary adjustment to the nearest \$100 bond is also shown. It will be seen that the amount of principal retired is small at first and constantly increases, while the interest charge decreases. The sum of interest and principal remains constant, and this is an advantage as the tax is then uniform.

REPAYMENT OF A 4 PER CENT \$100,000 LOAN, INCLUDING BOTH PRINCIPAL AND INTEREST BY A UNIFORM ANNUAL PAYMENT
OF \$7,358.175 FOR 20 YEARS.

ADJUSTED TO NEAREST CENT				ADJUSTED TO \$100 BONDS			
Years	Principal Owing at Begin- ning of Year	Interest for Year	Principal Repaid at End of Year	Principal Owing at Begin- ning of Year	Interest for Year	Principal Repaid at End of Year	Total
1.....	\$100,000.00	\$ 4,000.00	\$ 3,358.18	\$100,000	\$ 4,000	\$ 3,400	\$ 7,400
2.....	96,641.82	3,865.67	3,492.50	96,600	3,864	3,500	7,364
3.....	93,149.32	3,725.97	3,632.21	93,100	3,724	3,600	7,324
4.....	89,517.11	3,580.68	3,777.49	89,500	3,580	3,800	7,380
5.....	85,739.62	3,429.59	3,928.59	85,700	3,428	3,900	7,328
6.....	81,811.03	3,272.44	4,085.73	81,800	3,272	4,100	7,372
7.....	77,725.30	3,109.01	4,249.17	77,700	3,108	4,200	7,308
8.....	73,476.13	2,939.05	4,419.12	73,500	2,940	4,400	7,340
9.....	69,057.01	2,762.28	4,595.90	69,100	2,764	4,600	7,364
10.....	64,461.11	2,578.44	4,779.73	64,500	2,580	4,800	7,380
11.....	59,681.38	2,387.26	4,970.92	59,700	2,388	5,000	7,388
12.....	54,710.46	2,188.42	5,169.75	54,700	2,188	5,200	7,388
13.....	49,540.71	1,981.63	5,376.55	49,500	1,980	5,400	7,380
14.....	44,164.16	1,766.57	5,591.60	44,100	1,764	5,600	7,364
15.....	38,572.56	1,542.90	5,815.28	38,500	1,549	5,800	7,349
16.....	32,757.28	1,310.20	6,047.88	32,700	1,308	6,000	7,308
17.....	26,709.40	1,068.38	6,289.80	26,700	1,068	6,300	7,368
18.....	20,419.00	816.78	6,541.39	20,400	816	6,500	7,316
19.....	13,878.21	555.13	6,803.05	13,900	556	6,800	7,356
20.....	7,075.16	283.01	7,075.16	7,100	284	7,100	7,384
Totals...		\$47,163.50	\$100,000.00	.....	\$47,152	\$100,000	\$147,152

Serial bonds, unless the issues are in large amounts, usually involve more difficulties in marketing than straight term bonds. Investors as a whole prefer bonds forming part of sub-

stantially large issues because there naturally are more buyers and sellers of these than in the case of small issues. In this way the prevailing market price of large issues of a single maturity can more readily be ascertained. Moreover, investment bankers frequently experience difficulties in disposing of some maturities of a whole serial issue, and are at times forced to curtail or reduce their profits by offering unsold maturities at lower prices in the market. There are relatively few individual investors that desire their commitments to mature periodically over a period of years. Hence, in the market of serial issues, it rarely happens that the investor will subscribe ratably to each maturity. As already pointed out on page 85, the overwhelming preference at times may be for short maturities, and at other times, for long maturities.

Notwithstanding state laws requiring the gradual amortization of new indebtedness created by municipalities, evasions or neglect of both sinking fund and serial payment provisions are encountered. An interesting example is furnished by a Mississippi road district which, in issuing \$200,000 of bonds, conformed to the state law requiring such issues to mature serially in from 10 to 25 years, by making nine annual payments of \$500 each and a lump payment of \$190,000 at the end of the 25th year. Similar instances of evasion of sinking fund requirements can also be given. In these matters, the municipal bond investors have a direct interest, but only the largest and most exacting bond buyers can afford the time, trouble and expense of personal investigation. The field is, accordingly, one for the banking houses, their specialists and attorneys.

There is a good deal of controversy as to whether it is less costly for a municipality to issue sinking fund bonds or serial bonds, but it has no great practical significance to the investor. The factor that should determine the issuance of the one type or the other is the investors' preference. If, at the time of issue, most investors desire short-term bonds, serial bonds may be issued under better terms to the municipality

than a long-term sinking fund issue. If long-term bonds are favored, sinking fund obligations may be sold on a better credit basis than the serial type. The instalment or serial bond method has the advantage of simplicity since it merely requires a calculation of the number and the amount of maturities and does not involve mathematical computations of compound interest or the risk in carrying sinking fund investments. However, as stated above, the sinking fund accumulations may be applied directly to the purchase of the debt which is to be amortized and in this respect, the method would not differ essentially from the serial payment plan.

Market for Bonds.—Municipal bonds, for various reasons, are eagerly sought for by investors. They are, in the first place, exempt from federal taxation and also generally from the taxes of the state in which the debtor is located. They do not, however, enjoy the same exemption in other states. The bonds have a preferred market also because of the laws permitting savings institutions and trustees to invest their funds in them. The New York law allows savings and trust funds to be invested in the debt of a political subdivision of the state, provided the total debt of the subdivision does not exceed 10% of its assessed valuation. The bonds of certain municipalities outside the state are also made "legal" for savings banks when the finances of such cities comply with the requirements laid down by the New York State Banking Department. Massachusetts, Connecticut and New Jersey have similar laws.

Municipal Statistics.—A few words may be said regarding the statistics which are issued in connection with the marketing of municipal bonds. It is the common practice of municipalities to publish figures relating to assessed valuations, the amount of outstanding indebtedness, revenues, tax receipts, expenditures, and the like. The investor should carefully analyze these figures before making a commitment. Frequent reference has been made to the unreliable character of

figures relating to assessed valuations. The figures on actual indebtedness are also often misleading. For example, bonds that have been issued for revenue-producing purposes may be excluded from the figures of indebtedness on the ground that they pay for themselves. It is very difficult in some cases to determine whether some bonds are based on revenue-producing improvements or not. It should be borne in mind that only when the improvements yield a sufficient income to meet the principal and interest of the obligations can they properly be considered revenue-producing. Under the laws of several of the states, municipal bonds of this character are not included in the legal limit placed on municipal borrowing. Thus the bonds of New York City issued for rapid transit purposes originally did not come within the ten per cent limitation placed on the city's borrowing power, but the subway construction has lately furnished insufficient revenue, so that bonds issued for this purpose are included with others comprised within the legal borrowing capacity. In studying statistics of municipal indebtedness the sinking fund assets held for payment of debt should be taken into consideration, and the net debt should always be distinguished from the gross debt.

Investors would do well also carefully to analyze each item in a city's debt and clearly understand its nature. There are frequently items representing temporary borrowing on so-called "tax-anticipation" certificates, which are presumably to be paid off when the current tax levies are received. Such items are not covered by municipal expenditure resulting in the direct acquisition or possession of tangible property or improvements, as they have been contracted for revenue, and not for capital purposes. The distinction between these two objects of debt contraction should be clearly made in each municipal debt statement.

Assessment Bonds.—Municipal indebtedness should be further analyzed in respect to the relationship of the obliga-

tion to the community as a whole. It has long been a practice, for example, for many communities to issue bonds, known as "special assessment" bonds, which are usually secured by unpaid special assessments against property that is benefiting directly from improvements made with the aid of the debt incurred. These special assessment bonds may or may not be direct obligations of the municipality. In any event, they should be separated from, and their amount compared with, the other bonds which represent indebtedness secured by all the taxable property in the municipality.

REFERENCES

(Same as Chapters XIX and XX)

Part IV—Corporation Securities

CHAPTER XXI

CORPORATION FINANCIAL STATEMENTS

EARNINGS, PROFITS AND SURPLUS¹

The Science of Accounting.—It was pointed out in a previous chapter that civil loans as investments were distinguished from business obligations by the fact that the intrinsic worth of the former was grounded on governmental taxing power, whereas the latter were based on assets and earning power as affording security. A detailed consideration of corporation securities as investments, therefore, should include a discussion of the means and methods of determining asset values and earnings. The corporation financial statements provide the most important one source of information of this nature.

The study of financial data with a view to gauging the relative investment merits of securities requires some understanding of bookkeeping and accounting principles. Accounting is the science which applies rules and methods to recording financial and business transactions, and to summing up their results in statements from which a layman can get a concise and proper conception of the financial standing of a distinct undertaking. Prior to the advent of the corporate form of business organization, bookkeeping was concerned almost exclusively with tracing the movements of cash. The accounts

¹ In this and the following chapter, the author has used freely material contained in a previously written pamphlet, entitled *The Analysis of Financial Statements*, published by the American Securities Service, Inc.

showed the sources and amounts of cash received and the manner in which the receipts were disbursed. The main purpose of the early accounting methods was to test the honesty of the employees that handled the cash. The gauging of the proprietor's profits or the results of individual transactions was of secondary importance.

Two Systems.—Present-day accounting has a far broader purpose. It aims to exhibit in correct and intelligible form the net gain or loss on operations, independent of the movements of cash. The tracing of the actual receipts and disbursements of cash, though an important part of every accounting system, has no direct relation to the results of the business operations, and is absolutely no gauge of the net losses or gains experienced in a specific period of time, or of the net worth of the concern. Profits may be earned even though they are not actually realized in cash. Items of expense are frequently incurred, though not yet due and paid. These principles, now so commonplace and so widely accepted, distinguish the so-called "double-entry" system of bookkeeping from the "single-entry" system. They permit a cross-section view, so to speak, of a concern's financial condition and show the results of its fiscal operations.

Corporation Financial Statements.—The investor's knowledge of the accounts of a business corporation is generally limited to the periodically published statements furnished to stockholders, bankers or the public. These data are highly summarized; moreover, accounting methods used by corporations are not uniform; and unusual entries, classifications, and valuations of one sort or another are at times made with or without intent to deceive. Consequently, to find the real meaning of the items and figures shown in statements requires careful analysis and comparison. Financial statements, in other words, require not only to be read, but to be studied. They should be compared, tested and criticized.

In examining corporation financial statements, the ordinary investor or business student is generally limited to the most concise summaries by which operating results, costs and profits can be tested and compared as between different companies or as between different periods of time. Yet, there are many factors outside of the bare published figures to be considered in an analysis of financial statements. "Averages" or "ratios" so frequently used in the financial press and in investment manuals may be misleading if these broader factors are lost sight of. The financial statements of the United States Steel Corporation and the Bethlehem Steel Corporation are commonly compared because they are competing concerns of the same standards of operating efficiency and financial standing. In organization and scope, however, they differ considerably. The United States Steel Corporation is a "holding company," controlling through stock ownership subsidiaries, *i.e.*, other companies, engaged in every phase of iron and steel manufacture, transportation and distribution. The Bethlehem Steel Corporation, also a holding company, produces primarily highly fabricated steel products such as ordnance, munitions, ship plates, rails and other railroad materials. It is engaged also in shipbuilding and ship repairing. The differences in the relative size and character of their respective operations are sufficient to cause material differences in their capitalizations, their operating costs and their rates of profit.

Upon considering, for instance, how different steel making is from textile manufacture, textiles from chain store operations, and the latter from many other classes of merchandizing, it becomes readily apparent that in every financial analysis with a view to determining comparative investment values, the special character of a company's business, the relative size of its plants, and the scale of its operation should be given full and proper weight. Financial statements represent merely summaries of the books of accounts. To interpret them adequately and effectively, they should be studied in terms

of the industry and the character of the operations from which they have been derived.

Classification of Financial Data.—The statements containing financial information are usually three in number, *viz.* :

1. The income statement
2. The profit and loss, or surplus, statement
3. The general balance sheet

The three are correlated and interdependent. Changes in one are generally reflected in either or both of the other two. The income statement and the profit and loss statement have to do, respectively, with operation and proprietorship. By "proprietorship" is meant the difference between the total resources and the total liabilities to all except stockholders as such. This "proprietorship" is known as the "net worth" of the concern, and is frequently termed the "stockholders' equity." The data given in the income statement show how the profits and losses for a definite period have been made. The profit and loss statement shows the disposition made of the net profits or losses, the amount paid in dividends, and the amount which remains in the business as a surplus, or deficit in case of a loss. The two statements are frequently combined in one; the profit and loss statement following in succession the income statement. The general balance sheet, on the other hand, is an exhibit of financial condition. It shows in summarized form the resources or assets on a given date, and the offsetting liabilities or claims. In the liabilities column are included capital stock, profit and loss (or surplus, as it is commonly called) and other items representing net proprietorship. The inclusion of the net "proprietorship" among the liabilities forms the connecting link between the income statement and the general balance sheet.

Charging to Income or to Capital.—Because the income statement is a device for tracing the effects of business opera-

tions in terms of profit and loss, all financial transactions which are entered directly in the operating accounts are said to be charged or credited to income—as distinguished from transactions which are entered in the general balance sheet, either directly or through adjustments in the profit and loss account. The latter entries are “charges” or “credits” to capital. A business expenditure that is “charged to income” is considered as current or temporary because the value obtained therefrom does not immediately become a part of the assets or of the proprietorship. Hence, the aggregate of values in the general balance sheet is not affected by the expenditure until the net results of a period’s total operations, as shown by the profit and loss statement, are entered on the general balance sheet. The general balance sheet, therefore, is not only the result of the company’s business operations of the year covered by the statement, but prior thereto as well.

Analysis of Income or Profits.—The usual simplified form of an income statement, or as it may more properly be termed, the “operating account,” and arrangement of the items, are shown in Figure 3. While particular items vary somewhat with the business important companies almost without exception adhere essentially to this form of statement. The statement purports to bring together the items which show *for a definite period*, (1) the amount of money a corporation received or is entitled to receive from its current operations; and (2) the payments made or obligations incurred on account of the amount so received or to be received; and (3) the excess or deficit of such receipts and claims as compared with the expenditures or obligations thus assumed. It shows properly classified, in other words (1) income, (2) expense, and (3) the net result. The details of this part of the income statement are known as the operating account.

To the net result of the operating account is generally added the miscellaneous and incidental income or revenues of the

company. From the resulting product, technically called the "net income," the interest on bonds and other forms of indebtedness and certain other accrued charges are deducted, and the balance remaining, if any, is the surplus or addition to "proprietaryship," from which dividends are disbursed to the stockholders.

1. Gross Earnings or Revenues	\$.....
(These include the receipts, or amounts due, from current operations; as sales, transportation earnings, or interest and dividends from investments, depending upon the nature of the business.)	
2. Deduct: Cost of Manufacture or Operation	\$.....
(Included here are direct materials and labor expense, upkeep costs or cost for repairs and renewals, deductions for depreciation, obsolescence, and other manufacturing or producing costs, <i>viz.</i> , rents, taxes—except income taxes, insurance, etc.)	
3. Gross Profits	\$.....
(This is the amount remaining after operating costs have been deducted from gross earnings.)	
4. Selling and Administrative Expenses	\$.....
(This item covers all expenses not already included under 2 above.)	
5. Net Profits	\$.....
(The balance remaining after 4 is subtracted from 3.)	

Figure 3. Simple Form of Income Statement

Many industrial corporations fail to make known publicly all the information called for in the above income account. The motives for concealment may vary in individual cases, but on the whole the purpose is to prevent competitors, customers and the public from knowing the rate of profit, on sales or output, the operating costs and other financial details of a private character. The general tendency, however, is toward greater accounting publicity, and several of the large industrial companies such as the United States Steel Corpora-

tion, the International Harvester Company and the F. W. Woolworth Company, publish statements of gross sales and income as well as details of operating costs. Railroad and public utility companies are, in most cases required to furnish

REPUBLIC IRON & STEEL COMPANY	
INCOME ACCOUNT AND STATEMENT OF SURPLUS	
<i>For the Year Ending December 31, 1924</i>	
Net Earnings from operations after deducting charges for maintenance and repairs of plants, amounting to \$3,932,216.25	\$ 3,769,353.86
Interest and Income from Investments	645,303.25
TOTAL PROFITS FOR THE YEAR	\$ 4,414,657.11
Less:	
Provision for Depreciation and Renewals of Plants	\$1,133,130.64
Provision for Exhaustion of Minerals	240,957.83
Interest and Discount on Bonds	1,122,632.34
	2,496,720.81
NET PROFITS FOR THE YEAR APPLICABLE TO	
Dividends	\$ 1,917,936.30
Surplus at December 31, 1923	33,003,835.76
	\$34,921,772.06
Deduct:	
Dividends—8% on Preferred Stock	*2,000,000.00
NET SURPLUS CARRIED TO BALANCE SHEET ..	\$32,921,772.06

Figure 4. Income and Profit and Loss Statement of an Industrial Company

such detailed statements to the public authorities, and accordingly have no motive in concealing them from their security holders.² The form of an income statement is shown in Figure 4.

² Regarding statements required by the New York State Stock Exchange from corporations applying for the privilege of "listing" securities see Appendix B.

What Constitutes Net Income or Profits.—The financial results of operations shown under the item “net profits” on page 266 are of special interest to the investor since from the amount shown, the interest on bonds and dividends on stocks are commonly paid. But every financial statement of a going business, no matter how accurately and scientifically drawn up, is *after* all only an estimate, an approximation to the truth. Considerable latitude of variations from exact facts may occur without willful intent to deceive. The earning of profits represents a continuous operation. Actual results could be definitely stated only were the business wound up and all assets realized in the form of cash.

Moreover, the varying character of business corporations leads to many difficulties in determining their relative net incomes or estimating their earning capacities. A mining company's profits are not to be measured against a railroad corporation's net income. In the case of the mining company the business is of a wasting character. The value of the property is diminished continuously by operations, and no scheme of accounting can accurately provide for offsetting the capital loss. A railroad, on the other hand, is a permanent property, and when properly maintained or improved, increases in worth by constant use. Its value, therefore, may be enhanced by constant operation, and no allowances or deductions need be made from the dividends received by railroad shareholders to offset declines in the value of the investment. Many industrial and public utility concerns also operate business of a permanent and enduring character, whereas others depend upon public demands and tastes which may substantially change and cause fluctuations in earning power and value of assets.

Upon considering a given income statement, therefore, it is essential to analyze both gross earnings and operating expenses rather critically, with reference to the integrity of net income. A good showing in gross revenues obtained by business of a temporary nature, as war orders for instance, or a

poor showing in net income due to unusually large outlay for maintenance, are not really what the results in the statement actually show.

Gross Earnings.—Gross earnings or revenues, the first item appearing in the statement, whenever possible should be analyzed with reference to some basic unit of output. In the case of railroads and public service companies, standard units, such as the ton-mile, car-mile, the kilowatt hour, the 1,000 cubic feet, etc., are available. But most manufacturing and merchandising concerns have a varied output that renders difficult or impossible the application of a standard unit for its measurement. The gross earnings of several copper companies and sugar companies may be computed on the basis of unit of products sold. And the revenues of some automobile concerns may be compared with the number of cars sold. Such companies often, however, carry on complementary lines of business, the revenues from which may not be so readily measured.

Classification of Operating Costs.—Operating expenses, from the investor's viewpoint, may be roughly grouped under these two general heads:

1. Producing and distributing expenses, including direct and indirect labor and material costs, superintendence and other so-called "overhead" charges.
2. Upkeep costs, including actual expenses for plant maintenance and the reserves set aside for depreciation, obsolescence, and non-recoverable losses of wasting assets.

Very few corporations separate these costs accurately and fully in their published financial statements. Their separate study is of interest, however, as a means of checking the statement of net profits. Under normal conditions in most businesses, it is true, increase in sales or revenues is of greater financial importance than proportionate reduction in operating

expenses. This is due to the fixed character of a large part of operating costs, which remain constant regardless of fluctuations in volume of business. Hence, during dull periods only a part of the operating costs can be materially reduced, whereas many expenses do not rise when business is materially increased. A greater net profit per unit of output, therefore, is normally afforded during a period of business growth than during times of business depression. Whatever may be the fluctuations in the gross business, however, the handling of expenses merits careful analysis.

Maintenance and Depreciation Charges.—Important items often requiring separate analysis and investigation are maintenance and depreciation provisions. Maintenance costs are undergone to preserve the property and assets in proper condition for efficient operation. The purpose of a depreciation account is to show the amount set aside from current income for unrecoverable losses in the value of assets due to use, to obsolescence, or to inadequacy.

Within some industries, notably railroads, the depreciation expenses are so intricately woven with repair and upkeep expenses, that there is little necessity for separate depreciation accounts. In many lines of business, however, depreciation reserves are essential to maintain intact the value of the property investment and thus prevent the impairment of capital. Steel manufacturing companies, shipping concerns and public utilities that have capital invested in large units of equipment which in time must be displaced or replaced as a whole cannot usually cover such depreciation through ordinary current upkeep outlays.

The Measure of Maintenance and Depreciation.—It is evident from the foregoing that adequate maintenance and depreciation outlays should be provided for in the accounts before a proper estimate of net profits can be arrived at. The amount which is adequate for such purpose in any year is in-

fluenced by, (1) the nature and amount of business done, *i.e.*, the gross revenue, (2) the structural character of the physical properties and the effect of use or the elements on their deterioration, (3) the progress of invention or relative changes in operating methods in the industry, and (4) the skill and care with which employees handle plant equipment. A railroad company handling a heavy traffic, for instance, will generally require larger outlay per mile, for upkeep, than one that has a light traffic. Old dilapidated plants call for relatively larger maintenance outlay than new, well-equipped structures. And when employees, through discipline and good management, refrain from abusing physical equipment, repair bills are reduced and the life of such assets extended.

Although ordinary maintenance outlays are definitely ascertained and charged as expense when actually incurred, the amounts set aside to cover depreciation are usually estimates to be based on expert opinion and the lessons of experience. In practice, accountants and engineers leave these matters to the judgment of the corporation's managers and directors. Consequently, there is considerable opportunity for the understatement or overstatement of accruing losses due to depreciation. It is for this reason that the item is scrutinized critically by investment statisticians.

The Operating Ratio.—The total operating expenses, including depreciation and other reserves against actual or probable losses, when expressed as percentage of the gross revenues, is designated by investment statisticians as the "operating ratio." Thus, in the income statement of the Delaware and Lackawanna Railroad in Figure 5, the operating expenses in 1924 amounting to \$64,485,909, were 74.4% of the gross revenues of \$86,727,184, so that percentage is the operating ratio. The item is generally considered a valid index of the profitableness in operations, *i.e.*, the lower the ratio the greater profit, and vice versa. Used correctly, this is so. But the

DELAWARE, LACKAWANNA AND WESTERN RAILROAD				
STATEMENT OF OPERATIONS FOR CALENDAR YEARS				
Revenues—	1924	1923	1922	1921
Coal.....	\$23,576,425	\$25,151,010	\$14,294,191	\$26,606,299
Merchandise freight.....	39,874,878	39,085,364	37,262,516	36,970,445
Passenger.....	13,600,454	14,185,914	13,960,681	14,438,161
Mail.....	876,106	789,391	733,159	587,733
Express.....	1,642,370	1,834,068	1,652,802	1,009,055
Milk.....	2,302,113	2,183,334	1,963,564	1,974,035
Other revenue.....	3,365,153	3,396,778	3,209,846	2,944,928
Incidental revenue.....	1,489,685	1,611,115	1,545,586	1,447,159
Total.....	\$86,727,184	\$88,236,974	\$74,022,344	\$85,977,815
Expenses—				
Maintenance of way and structures.....	\$ 7,745,720	\$ 7,663,064	\$ 7,882,540	\$10,022,415
Maintenance of equipment.....	18,699,630	21,239,075	18,683,608	19,053,845
Traffic expenses.....	1,406,168	1,308,121	1,349,689	1,305,321
Transportation expenses.....	34,091,817	36,750,177	33,242,097	34,819,694
Miscellaneous operations.....	656,537	681,739	680,770	685,096
General expenses.....	1,924,510	1,853,903	1,872,164	2,039,185
Transportation investment.....	Cr.38,473	Cr.28,224	Cr.39,221	Cr.53,500
Total expenses.....	\$64,485,909	\$69,467,853	\$63,671,647	\$67,872,058
Net revenue from operations.....	\$22,241,275	\$18,769,120	\$10,950,697	\$18,105,757
Railway tax accruals.....	6,900,102	5,995,698	4,894,466	5,312,066
Uncollectible railway revenues.....	12,510	22,253	9,944	12,295
Operating income.....	\$15,328,663	\$12,751,170	\$ 6,046,287	\$12,781,395
Additional Income—				
Joint facility rent income.....	\$ 145,592	\$ 139,070	\$ 143,112	\$ 138,900
Hire of equip.—Cr. bal.....	451,707	852,759	752,237	364,136
Inc. fr. unfd. sec. and accts.....	229,447	83,967	535,116	699,208
Miscellaneous rent income.....	267,213	281,084	276,652	251,418
Misc. non-op. physical property.....	63,854	64,765	105,522	94,190
Dividend income.....	505,566	571,665	453,086	444,065
Income from funded securities.....	4,050,105	3,973,793	3,611,792	771,650
Miscellaneous income.....	11,081	4,755	2,100	392
Income from sinking and other reserve funds.....	1,972	1,468	1,038	1,038
Inc. from lease of road.....	11,265	16,143	9,224	442,443
Rev. prior to Jan. 1, 1918.....				Dr.4,656
Depletion of coal deposits.....				1,648,955
Earnings coal dept.....	Dr.164	418	43,847	6,626,405
Guaranty period income.....				2,000,000
Adj. of settlement, U. S. R. R. Administration.....			4,699,064	
Sundry additions and deductions.....	Dr.37,295	Cr.331,409	Cr.168,984	Dr.268,789
Gross income.....	\$21,029,006	\$19,072,466	\$16,848,062	\$25,990,749
Deductions—				
Rentals of leased road.....	\$ 5,967,749	\$ 5,714,374	\$ 5,273,169	\$ 5,356,540
Int. from funded debt.....	5,856	5,856	5,914	6,142
Rental New York piers.....	348,156	348,284	349,089	351,121
Additions and betterments.....	569,808	503,136	732,537	1,105,555
Int. on unfunded debt.....	38,377	122,814	11,425	16,857
Exp. prior to Jan. 1, 1918.....				Cr.3,869
	\$14,099,060	\$12,378,001	\$10,475,929	\$19,158,403
Dividends declared.....	11,821,754	10,132,932	10,132,932	13,510,576
Balance, surplus.....	\$ 2,277,306	\$ 2,245,069	\$ 342,997	\$ 5,647,827

Figure 5. Example of Detailed Comparative Income Statement of a Railroad Company

figure is often misused in comparisons, and wrong conclusions drawn from it. An error can readily be made, for instance, in comparing the operating ratios of two concerns, one of which charges as much of permanent improvement expenditure as possible to repairs and renewals, and the other none at all. Again, a large output of a product in steady demand permits a high operating ratio and a profitable return on investment. Much depends here on the "rate of turnover." By rate of turnover is meant the number of times during a given period that the average amount of stock in trade, whether finished goods or new materials, is bought and resold or otherwise disposed of. If the turnover is rapid, quick sales and small profits are the rule. This is the case of the packing business, the chain grocery stores and many other concerns producing or merchandizing staple products in general demand. On the other hand, a locomotive, shipbuilding or machinery manufacturing concern, which requires large capital outlays and a long period of time to complete a unit of production ordinarily shows low operating ratios, without necessarily correspondingly high profits.

Margin of Safety.—Net income as defined on page 268 is of peculiar interest to holders of a company's bonds, since from it the interest he receives is paid. It is a gauge or rough index of the extent of the company's earning power. The surplus earnings, being the excess of net income over the interest charges, are frequently looked upon as a margin of safety safeguarding the interest payments, and are therefore the chief determinant of the investment standing of the securities. Thus, if a company has bonds outstanding bearing an annual interest requirement of \$100,000 and the surplus earnings after fixed charges, including the interest, for each of a series of years are approximately \$100,000, the margin of safety is said to amount to 100 per cent. In other words, the net earnings have been double the interest requirement.

Many business concerns have a number of bond issues differing in priority as to claim upon net income, and the margin of safety is calculated with reference to each issue. The relative market standing of each of several bond issues of a concern is largely gauged, other things being equal, by the amount of the margin of surplus earnings on which there is a prior claim. Thus, the Chicago, Milwaukee and St. Paul Railroad General $4\frac{1}{2}\%$ Bonds, due 1989, sold at $68\frac{3}{8}$ when the price for the bonds known as the General and Refunding $4\frac{1}{2}\%$ Bonds, due 2014, was 54. The difference in the maturity date of these two series of bonds of the same corporation, each bearing the same interest rate, did not warrant the disparity in their market prices. The fact that the general mortgage bonds as an obligation had a prior claim on the earnings and the property of the corporation accounted for the superior market position of the issue.

The question of an ideal margin of safety as a factor in the security of income is of purely academic interest. The wide disparities in operating conditions affecting income stability do not permit the establishment of a definite rule. It is evident from the relative market price of securities that a margin of 25% above fixed charges in one company's income statement may be a better basis of security value than a 100% margin in the income statement of another company. Stability of earnings from year to year is a factor in the security of income which eliminates the necessity of a large margin of safety.

The Profit and Loss Account.—The profit and loss account, as already pointed out, is merely a continuation of the income or operating account and the two are frequently placed in one statement. In order that a profit and loss account should be complete, however, it is essential to bring into the statement the accumulated credit (surplus) or debit (deficit) balance as shown in the general balance sheet. A common arrangement of the profit and loss statement is given in Figure 6. This

form is not strictly adhered to by all corporations. It is a practice of many companies to deduct dividends directly from net income, as shown in Figure 7, in order to show the relation of the amount paid in dividends during the period to the net income available for this purpose. In this way, the percentage earned on the stock for the period can be computed.

1. Net Profits from Operation	\$.....
2. Add: Other Income	
Interest received or accrued on bonds held	\$.....
Rentals and Royalties received or accrued	\$.....
Other income received	\$.....
3. Total Income for the period	\$.....
4. Deduct:	
Interest on bonds (paid and accrued)	
for the period	\$.....
Other fixed charges (rentals, income	
taxes, etc.)	
5. Total fixed charges	\$.....
6. Net Income for year	\$.....
7. Add: Surplus (as shown by balance sheet) at end of	
previous period	\$.....
8. Total	\$.....
9. Deduct:	
Extraordinary charges not applicable	
to operations of period	\$.....
Dividends declared during period	\$.....
Special provisions for contingencies,	
etc.	\$.....
10. Surplus carried to balance sheet	\$.....

Figure 6. Profit and Loss Statement

The method of deducting dividends from accumulated surplus, though perfectly proper, has one disadvantage. It may divert attention from extraordinary losses or necessary provisions for important contingencies. It has become a too common practice for corporations to throw back extraordinary

losses (such as the heavy losses on account of depreciation in stock and inventories, or loss from sale or destruction of

Kelly-Springfield Tire Company INCOME ACCOUNT AND PROFIT AND LOSS FOR CALENDAR YEARS			
	1924	1923	1922
Gross profits.....	\$7,255,746	\$9,559,804	\$12,531,379
Operating expenses.....	6,838,513	8,797,398	7,305,176
Net operating income.....	\$ 417,233	\$ 762,406	\$5,226,203
Other income.....	300,425	345,130	351,643
Total oper. income.....	\$ 717,658	\$1,107,536	\$5,577,846
Interest on 10-yr. 8% notes.....	\$ 690,000	\$ 770,000	\$ 800,000
Miscellaneous deductions.....	301,033	354,062	464,465
Depreciation.....	1,252,374	1,149,759	1,168,832
Net income.....	def \$1,525,749	def \$1,166,285	\$3,144,549
Previous surplus.....	\$5,638,045	\$8,231,956	\$6,116,777
Miscellaneous credits.....	deb 170,172	28,136	11,078
Total.....	\$3,942,124	\$7,093,807	\$9,272,404
Taxes.....		\$ 427,916	\$ 70,446
Adjustments.....		173,262	97,744
Retirement of Preferred stock....		252,308	253,959
Total surplus.....	\$3,942,124	\$6,240,321	\$8,850,256
Dividends on 6% Preferred.....	\$ 44,250	\$ 177,900	\$ 181,113
Dividends on 8% Preferred.....	105,294	424,376	437,186
Common dividends (cash).....			
Common dividends (stock).....			
Appropriation from surplus 6% Pf. stk. redeemed.....	Cr 808,200	Cr 808,200	Cr 721,100
Appropriation from surplus 8% Pf. stk. redeemed.....	Cr 595,500	Cr 595,500	Cr 415,500
Balance, surplus as shown in balance sheet.....	\$5,196,280	\$7,041,745	\$9,368,556

Figure 7. Income Account—Dividends Deducted from Net Income

assets) on the accumulated surplus of previous years without sufficiently disclosing the same. One reason for this is that the profit and loss statement or adjustment of surplus account is generally overlooked by investors, notwithstanding its importance in the analysis of financial condition.

REFERENCES

- Accountants' Handbook*. Published by the Ronald Press Co., New York.
(A convenient reference book, useful to investment students as well as accountants.)
- BLISS, J. H. *Financial and Operating Ratios in Management*. New York, Ronald Press Co., 1923, 396p.
- BLISS, JAMES H. *Management Through Accounts*. New York, Ronald Press Co., 1924, 851p.
- FINNEY, H. A. *Consolidated Statements for Holding Company and Subsidiaries*. New York, Prentice-Hall, 1922, 229p.
- HATFIELD, H. R. *Modern Accounting, Its Principles and Some of its Problems*. New York, D. Appleton & Co., 1909, 367p.
- STOCKWELL, HERBERT G. *How to Read a Financial Statement*. New York, The Ronald Press Co., 1925, 443p.
- WALL, A. *Analytical Credits*. Indianapolis, Bobbs-Merrill, 1921, 258p.

CHAPTER XXII

CORPORATION FINANCIAL STATEMENTS

ASSETS, LIABILITIES AND WORKING CAPITAL

General Balance Sheet.—In studying relative security values, the balance sheet is frequently neglected or passed over hurriedly, not because it is less important than the income statement, but because it is less readily understood. The general balance sheet, if properly prepared and certified, should show as nearly as possible the corporation's correct financial condition as determined by the operating results and fiscal changes since its corporate organization. It is thus a portrayal of cumulative effects, whereas the income statement is merely an exhibit of the results of a year or even a shorter period. The general balance sheet, therefore, when accurately compiled and properly interpreted, furnishes a better measure of security of principal than current earnings, which frequently are the result of temporary or abnormal conditions.

The balance sheet is generally arranged in two columns, technically known as "assets" and "liabilities." The assets represent the debits of the business, or the various items of wealth it has been entrusted with and is responsible for. The liabilities represent the credits, or amounts credited to others. They include (1) the liabilities proper, or debts owed to creditors, and (2) the capital stock, surplus, and other "proprietary" items which represent the excess of the total value of the assets over the sum of the debts. Thus, the asset side of the balance sheet sets forth the kind of wealth owned and its value, while the liability side shows in a sense how the claims against that wealth is apportioned between the creditors and the stockholders.

Form of the Balance Sheet.—The usual form of balance sheet as indicated on page 281 divides the assets into three classes, namely:

1. Capital or fixed, assets, representing the fixed or permanent investment in the property together with certain other assets of an intangible nature, such as goodwill, patents, franchises, etc.
2. Current assets, comprising cash and the goods which are manufactured or bought and sold or held in the regular course of operations.
3. Deferred charges, representing expenses paid before they have been actually incurred.

Some of the assets are set aside in special funds out of profits or otherwise for specific purposes, as sinking funds to meet, for example, outstanding bond issues.

On the liability side a similar classification prevails, namely:

1. Capital, or fixed, liabilities, including the capital stock and funded debt which remain fixed for a number of years at least.
2. Current liabilities, including floating debts which have to be paid off in the ordinary course of operations within a short period.
3. Reserves or deferred liabilities, which are but deductions from the proprietorship and which represent loss of values through depreciation of assets or expenses that have been incurred though not yet paid.
4. The profit and loss surplus (if any) representing the net proprietorship, namely the difference between the total assets and the classes of liabilities enumerated above.¹

Model Balance Sheet.—A model or pro forma balance sheet is presented below in Figure 8. Apart from the item

¹ If the liabilities exceed the assets, the Profit and Loss item becomes a deficit and is placed in the asset column to make the balance sheet "balance." When shares of stock without nominal or par value are outstanding it is a common practice to have the amount of this liability (*i.e.*, the proprietorship) represented by the profit and loss surplus.

of deferred charges, the assets are grouped into two classes, *viz.*, (1) fixed and (2) current, and the items in each class are arranged in the order of their relative liquidity, or the ease with which they can be turned into cash, beginning with the least liquid. Not all concerns follow this order, some preferring (as shown in the balance sheet illustrated in Figure 8) to arrange the assets in sequence according to the relative convertibility into cash through sale or exchange. The latter plan is particularly desirable when winding up the concern's affairs or otherwise liquidating its property. A balance sheet which shows primarily cash or liquidation values is termed a "statement of affairs."

Capital or Fixed Assets.—Fixed, or capital, assets, are the general equipment with which the company does business, consisting of real estate, plant, machinery, etc. They are the items which remain permanently in the business and are not held to be converted or liquidated into cash. Expenditures for these fixed assets are the capital expenditures referred to earlier in this chapter. These were made in acquiring or completing the plant and equipment of an enterprise with a view to placing the business on a revenue-earning basis. The term "revenue expenditure," on the other hand, comprises all expenses against profits or revenue. The differentiation between capital expenditure and revenue expenditure depends, therefore, on the purpose of the outlay. If the outlay is such that it adds to or improves the plant or equipment of the business, and thus increases its capacity to earn revenue, it is charged as capital expenditure. Otherwise it is or should be charged as revenue expenditure.

Valuation of Fixed Assets.—Fixed assets, as a rule, are valued in the balance sheet at cost, regardless of their intrinsic value. The reason for this is obvious. They have been acquired and are retained, not with a view to being sold at a profit in the ordinary course of business, but to being used

BALANCE SHEET	
Assets	
FIXED:	
Plant	\$.....
Real Estate and Buildings . . . . .	.....
Machinery . . . . .	.....
Other . . . . .	.....
Permanent Investment . . . . .	.....
Good-will, Patents, etc. . . . .	.....
Total Fixed Assets	\$.....
CURRENT:	
Inventories	\$.....
Bills Receivable . . . . .	.....
Accounts Receivable . . . . .	.....
Cash . . . . .	.....
Total Current Assets	\$.....
DEFERRED CHARGES, ETC. . . . .	.....
Total Assets	<u>\$.....</u>
Liabilities	
FIXED:	
Capital Stock	\$.....
Bonds Outstanding . . . . .	.....
Total Fixed Liabilities	\$.....
RESERVES . . . . .	.....
CURRENT:	
Notes Payable	\$.....
Accounts Payable . . . . .	.....
Total Current Liabilities	\$.....
DEFERRED LIABILITIES . . . . .	.....
SURPLUS . . . . .	.....
Total Liabilities	<u>\$.....</u>

Figure 8. A Model Balance Sheet

in operating the business until they are worn out or discarded for some other reason. Fluctuations in value of fixed assets need only be considered when there is a change of ownership of the business. A revaluation is then in order.

If assets tend to depreciate or deteriorate through wear and tear, inadequacy, or obsolescence, it is assumed, as already shown, that such losses are provided for out of current revenues or earnings, and as charges of this character do not increase the amount of investment they are logically classed as revenue expenditures.

Valuation of Current Assets.—The valuation of current assets follows the rule, “cost or market value, whichever is the lower.” This means that if any of the current assets have declined in market value below their cost to the business, the difference between the market value and the cost is a loss that is to be charged against current earnings. It has already been shown that the essential feature of current assets is that they are intended for conversion into cash through sale or otherwise at the earliest opportunity. Hence, their market price is an important factor in their valuation. However, the theory governing accounting is that no profit can be realized until property or goods are actually sold, and it is therefore not safe to increase the value or to take credit for any profit thereon until a sale or segregation has been effected. Accordingly, no appreciation in the value of any assets should be brought into the accounts because of a rise in their market value, unless they are disposed of and the profit is actually realized.

Working Assets.—The relative amount and kind of the free “working,” or “liquid” assets, *i.e.*, cash or cash equivalents, of any organization requires in many cases closer observation and analysis than the property accounts, or fixed assets. It is with the working assets that an enterprise meets

its current needs and pays its current expenses and obligations. If the working assets do not suffice for this purpose the company must be able to borrow additional funds to avoid financial embarrassment. A receivership might result, therefore, even when the value of the fixed assets is in excess of that of the actual liabilities, or when the net earnings are sufficient to cover interest on funded obligations.

Liquid assets are thus a part of the necessary working machinery of any business organization. When the amount on hand is depleted, it must be replenished by borrowing or by reduction of wages or costs of upkeep and other necessary expenses and charges. Wage-cutting, however, may lead to costly labor difficulties, and reduction of necessary expenses may impair the company's credit, rendering impossible the securing of new capital required for improvements and extensions. Need for working capital arises from the expenditures for materials and supplies, wages, taxes, and the like, and also from expenditures for upkeep, improvements, and extensions caused by business expansion.

Among the working assets, in addition to cash and money owing to the business, are included the inventories on the finished goods, materials and supplies, and the readily marketable securities. The items requiring first consideration are cash and accounts receivable. The size of the cash balance together with other items readily convertible into cash when compared with the current requirements and the amount of construction work on hand may indicate roughly whether or not additional financing through sale of securities is necessary. The borrowing of additional funds has a direct influence, in some instances favorable and in others unfavorable, on the market value of securities already outstanding. Financiers and investors, therefore, scrutinize closely the cash position of a debtor concern. It is frequently the best available gauge of financial status.

Adequacy of Working Assets.—A common method of determining the relative adequacy of the working assets is by contrasting these items with the corresponding working liabilities, or current obligations on the opposite side of the general balance sheet. The latter generally comprise all the liabilities in the general balance sheet except capital stock, funded debt, reserves, and surplus. This comparison may be done in the following manner :

NATIONAL ENAMELING AND STAMPING CO., INC., DECEMBER 31, 1924

CURRENT ASSETS :

Stock of Merchandise, Materials and Supplies on hand and in transit.....	\$7,004,712 70	
Accounts and Notes Receivable after providing for Discounts and Bad Debts....	2,191,598 31	
Cash at Bankers and on Hand.....	995,676 53	
		\$10,191,987 54

CURRENT LIABILITIES :

Notes payable	\$1,700,000 00	
Accounts payable	1,268,265 79	
Accrued Interest on Refunding First Mortgage 5% Gold Bonds	4,995 83	
		2,973,261 62
Net working capital.....		<u>\$ 7,218,724 92</u>

The item of net working assets, or net working capital, as it is called, is the reserve force in operating a business. It is, therefore, essential in investment analysis to test its adequacy from a variety of angles.

Testing Adequacy of Working Capital.—While no rule for testing adequacy of net working capital can be applied in a hard and fast way, the amount required in each case is determined by certain factors, the chief of which are these :

1. Nature of the business, i.e., the relative marketability of its output.
2. Rapidity of turnover.
3. Steadiness of sales throughout the year.
4. Credit accommodation granted customers.

5. Credit accommodation granted the business on the basis of its financial standing or the marketability of its assets.
6. Extent of the fixed capital investment.

Each of these will be considered in turn:

The Relative Marketability of Output.—Companies which produce goods or services that have a ready sale can, if they desire, easily reduce their working capital requirements by disposing of their output. A slight reduction in price below the ruling market of goods in general demand, such as food products, minerals and wearing apparel in common use, usually enables these producers to meet pressing obligations through sales. Thus, grain dealers can dispose of millions of bushels of wheat by merely selling at a few cents under the market. Meat packers, cotton goods manufacturers, and petroleum companies, likewise, generally can readily dispose of their output by lowering prices. Automobile and farm implement manufacturers, machinery producers, and locomotive and car companies, on the other hand, having narrow and specialized markets for their output, the demand for which is relatively inelastic, *i.e.*, cannot be increased easily through small price reductions, may find difficulty in reinforcing their working capital under unfavorable market conditions by attempting to dispose of stocks on hand.

Rapidity of Turnover.—It was pointed out on a previous page that rapidity of turnover makes possible the profitable conduct of business at a low rate of profit. One of the reasons for this is that a large amount of current assets, *i.e.*, merchandise and materials, relative to the amount of annual sales, is not generally required. A chain store company selling general merchandise in common use, such as the F. W. Woolworth Company or the Great Atlantic & Pacific Tea Company, can empty and refill its shelves many times on an average dur-

ing the year. Time, therefore, is not an element of cost with these concerns. They are receiving cash constantly and in this way pay off bills from day to day without incurring debts to carry them over a ripening period. Railroads and public utility companies likewise have a rapid turnover since they are receiving cash constantly for their services and are not required to maintain large stocks of materials on hand relative to their total investment.

A jewelry merchandising concern or a producer of a seasonal product such as women's fancy wearing apparel (dresses, millinery and fancy silks) generally demands capital for a "carry-over" period. Automobile and agricultural implement companies and other concerns which have one or two "seasons" a year in which sales are made and which require a lapse of considerable time in converting raw materials into the finished product, as a rule, must have on hand a large amount of net working capital in relation to the annual sales.

Steadiness of Sales Throughout the Year.—This is closely related to rapidity of turnover, since concerns that are able to convert their current assets constantly from materials into cash and from cash back into materials without seasonal variations or interruptions have no need for extra working capital during a carry-over period. However, if a concern produces a product or a service which requires considerable lapse of time for its completion, even though its sales are regular throughout the year, it necessarily requires greater working capital than another doing a similar volume of business, but having a rapid turnover.

Credit Accommodations Granted to Customers.—In industries where long terms of credit are granted to purchasers or customers, such credits have the same effect in the relative need for working capital as delayed sales or as long periods required for completion of the cycle of manufacture and distribution. Agricultural implement manufacturers, fertilizer

companies, clothing manufacturers, and many producers and merchandisers of products such as pianos, phonographs, washing machines, etc., sold on the instalment plan are in this class. The International Harvester Company, the American Agricultural Chemical Company and the American Woolen Company are among concerns of this sort.

Credit Accommodations Granted the Company.—As pointed out above, concerns that can readily borrow on their current assets are relieved of the provision for large working capital in relation to the volume of their business. Banks, bond houses and investment concerns dealing in marketable securities come within this class; also concerns which deal in raw materials in common use. These can borrow by hypothecating warehouse receipts, *i.e.*, mortgaging their goods in warehouses. Grain companies, raw cotton merchants, and even oil and iron or copper producing companies, find it easy to borrow a large part of their “carrying” requirements in this way.

Extent of the Fixed Capital Investment.—Companies which apply capital funds liberally for plant and equipment, particularly with a view to effecting economies in wages, materials or other production costs, frequently in this way reduce correspondingly their need for working capital. Thus steel companies, such as the United States Steel Corporation and the Bethlehem Steel Corporation, that possess their own ore and coal mines; sugar refiners and rubber manufacturing companies that have their own cane or rubber plantations, and paper manufacturers that have their timber reserves for pulp require a reduced amount of current assets in the form of ready raw materials and supplies.

The transfer of assets from current to fixed form is constantly going on in all large corporations. The introduction of expensive labor-saving machinery in plants reduces the wage bill and correspondingly the retention of current

cash to meet wage bills. The ownership of buildings and factories in lieu of leasing same reduces direct outlay for rent. The fundamental financial problem in all such capital outlays in fixed form is whether the operating economies resulting from the expenditure will offset fully the fixed interest charges on the new capital investment. Excessive investment in fixed assets is more dangerous to the financial stability of corporations than impairment of working capital, since fixed assets which are "sunk capital" are not readily liquidated for cash.² Applying these factors to groups of corporations, we find that:

Railroads, because of steady business operated on a cash basis, require for ordinary purposes a relatively small amount of working capital.

Public Utilities, because of large permanent plant investment and short credits granted consumers also require relatively small working capital in relation to volume of business or amount of plant investment.

Industrial companies as a class vary greatly in their working capital requirements. Some, such as the International Harvester Company, the Worthington Pump & Machinery Company, and the American Locomotive Company normally require a large excess of current assets over their current liabilities. On the other hand, the American Biscuit Company, the Corn Products Refining Company, the American Smelting and Refining Company, and other concerns conducting cash businesses with steady sales throughout the year require as a rule a relatively small amount of working capital in proportion to volume of sales.

Components of Capitalization.—Turning to the liability side of the general balance sheet, the first items generally comprise (1) par or nominal capital stock or shares, and (2) funded or bonded debt. The capital stock may be of one kind only, or of several kinds, and the company may also have no

² See Chapter VI.

bonds or several bond issues with varying maturities. All these items combined constitute capitalization. This capitalization refers to security issues, and not the amount of capital used by the company in carrying on business.

The issuance of shares without par value is fast becoming the general practice, and in course of time will constitute the leading method of expressing participation in the proprietorship of a corporation. The main advantage of no par value stock to the investor is that it eliminates to some degree the misrepresentation of the amount of capital, *i.e.*, cash or equivalent, actually invested in a corporation. It will also do away with the necessity of creating a "good-will" item among the assets to represent the excess of the par value of capitalization over the value of the tangible assets acquired through the issue of capital stock.

Equity of Bondholders and Shareholders in Assets.—It is a common practice of bankers, brokers and investors to compute the value of a corporation's bonds on the basis of the equity or claim of such bonds in the value of the tangible assets of the company as shown by the balance sheet. This is done in the following manner:

Total assets, December 31, 1922.....		\$100,000,000
Deduct: Good-will	\$20,000,000	
Current liabilities and reserves.....	25,000,000	45,000,000
Balance available for bonds		\$55,000,000
Bonds outstanding		20,000,000
Balance available for stock.....		\$35,000,000

This computation, except in the case of companies whose assets are valued on a cash liquidation basis, has little practical utility as an index of investment values.³

REFERENCES

(See under Chapter XXI)

³ For a bank statement indicating the equity or liquidating value of bank shares see page 406.

CHAPTER XXIII

RAILROAD SECURITIES

GENERAL CONSIDERATIONS

Development of Railroad Indebtedness.—The subject of railroad securities covers a large field, since, with the exception of the government issues, they are the most important class of investment securities marketed in the United States. As the principles of railroad investment do not differ materially from the general investment principles pointed out in the previous pages, only the distinctive features of railroad securities with which investors and students of finance must become familiar will be pointed out here.

A feature connected with railroad bonded indebtedness in this country is the early use of the mortgage lien. In Great Britain, where railroad building was slightly in advance of that in the United States, railroads were financed by issues of capital stock, or of ordinary certificates of indebtedness, which gave creditors no lien or preferential claim. Americans, however, seemed to have demanded some lien or assurance against loss in case their railroad investments would not be repaid when due. Accordingly, in the early period of American railroad construction, mortgages and other pledges became a predominant characteristic of railroad indebtedness. As the railroads grew in size and importance and as their capitalization increased, these railroad mortgages became more complex and intricate. Furthermore, the kinds and classes of railroad securities multiplied. Of course, a considerable part of American railroad financing has been accomplished through sale of stock and the shares of many existing railroad corporations are ranked among investment securities.

The history of the Erie Railroad mortgages offers a good illustration of multiplication of mortgage liens. The Erie was one of the first large railroad organizations in the United States. It was originally planned by the state of New York, but it was taken over, constructed, and operated by private initiative and enterprise. The first Erie mortgage was a document of but three printed sheets, which stated merely that the railroad hypothecated its properties to the bondholders. The most recent of the Erie mortgages covers more than 150 pages and contains abstruse provisions that only the statisticians, lawyers, and experts of banking institutions can interpret.

Before taking up the special characteristics of railroad mortgages, a brief discussion of the kinds of railroad bonds will be helpful. This has already been covered in a general way in Part I but because of special applications to railroad investment will be further discussed at this point. It is very important from the viewpoint of the bond investor to know the real character of his security, which is not always designated properly by its name. As already pointed out, a railroad company may issue a security and call it a "first and refunding" mortgage, when it is very little "refunding" and much less "first." No dependence can be placed upon the name of the bonds in obtaining an idea of the character of their security or the nature of the obligation they represent.

Debentures or Plain Bonds.—The plain railroad bond without the mortgage feature, as already stated, is rather the exception than the rule in this country. Very few of these issues are found in the American railroad list. Several of the New England railroads in the early days followed the policy of borrowing by sale of debentures, and a number of these issues are still outstanding. They are certificates acknowledging indebtedness of the borrower to the holder and agreeing to pay a certain sum as interest at specific intervals. In some cases, where there is a stipulation to that effect, a railroad de-

benture may subsequently become a mortgage bond when the railroad property is mortgaged as security for a new bond issue. The purpose is to give the outstanding debentures the same security as the obligations issued under a subsequently created mortgage. In this way a debenture may acquire the security of a mortgage without having anything on its face to indicate the fact. The New York Central and the Chesapeake and Ohio railroads have debenture bonds outstanding which because of subsequent mortgaging of their properties are now secured by mortgage liens.

Mortgage Bonds.—Railroad mortgage bonds have a specific lien on the whole or part of a railroad property. The lien entitles the bondholders to take possession of or to sell the property under legal procedure in case the debtor company fails to fulfil the provisions of the mortgage contract. The lien may be a so-called general mortgage, covering all the property owned and subsequently acquired by the debtor, or it may be limited to certain portions or divisions of the property. If it embraces not only the property that is owned when the mortgage contract is made, but also any property that may be later acquired, the clause in the contract which specifies this is known as the "after-acquired property" clause. Frequently railroad companies have been enabled to evade the after-acquired property clause. When prevented from issuing additional bonds under a mortgage with the clause, or from pledging newly acquired property under another mortgage, they have organized separate subsidiary corporations in whose name as debtor or mortgagor the mortgage agreement has been made. This practice has resulted in the creation of an excessive number of railroad mortgages covering a single railroad system. The so-called "divisional" mortgages, which are liens upon branches or sections of a railroad system, are in some cases the result of the evasion of the after-acquired property clause.

Collateral Trust Bonds.—The collateral trust bonds of railroads, by which a parent company borrows on the issued securities of its subsidiaries is frequently the effect of the after-acquired property clause. Railroad collateral trust bonds are of much the same nature as the mortgage bond and are also issued under a deed of trust, the only important difference being that the mortgage bond is a mortgage on realty or fixed physical property and the collateral trust bond is a mortgage on personalty represented by securities.

The personalty serving as the collateral securing collateral trust bonds is known in legal language as “things in action,” *i.e.*, claims. The pledge may consist of stocks or bonds, or both. It may be the bonds of the debtor company which issues the securities. For example, the Pennsylvania Railroad in April, 1920, sold its ten-year collateral trust bonds secured by its general mortgage bonds. A short time previously, the Baltimore & Ohio and the New York Central railroads issued collateral trust bonds, each secured in part by stock of the Reading Company. In this latter case the securities pledged were those of another corporation.

Additional examples of collateral trust bonds secured by the capital stock of other railroads are the Atlantic Coast Line “Louisville & Nashville Collateral Trust 4% Bonds,” and the Reading Company “Jersey Central Collateral Trust 4% Bonds,” due 1951. A number of railroad companies have issued bonds secured by the pledge of the capital stock of their coal companies or other separately incorporated industrial properties which they own.

Equipment Trust Certificates.—Another important class of securities issued by railroads is known as “equipment trust certificates.” These carry a lien on personalty consisting of physical property, such as locomotives and cars, *i.e.*, rolling stock of the railroads. Equipment obligations have attained

such importance as a distinct class of railroad obligations that they comprise a separate group among investment securities.

There were outstanding in the United States at the end of 1924 approximately \$750,000,000 of railroad equipment, or car trust certificates, as they are frequently called. The volume is constantly growing and in view of the fact that this form of indebtedness was not widely used as a means of borrowing until toward the end of the last century, their absorption by investors at low rates of income return is an indication of their popularity. Equipment trust obligations are peculiar in form, in security and in investment status. Their value rests to some extent on the general credit of the railroad company using them, yet as pointed out by Professor Dewing this general credit has little to do with determining their intrinsic merits.¹

The security of railroad equipment trust certificates, commonly known as equipment obligations is the pledge of personalty or chattels, consisting of locomotives or cars or both. In mortgaging chattels, *i.e.*, personal property, as distinguished from realty, certain legal provisions must be observed which generally do not apply to a mortgage on real estate or other fixed property. As in the case of collateral trust bonds, the mortgaged property secured by equipment trust certificates is legally placed in the possession of a trustee appointed to act as the agent or representative of the mortgagees, *i.e.*, the holders of the certificates. Equipment trust certificates, however, are peculiar in the respect that the mortgaged personalty is left in the possession and use of the debtor corporation, and is not held by the representative of the creditors, *i.e.*, their trustee to whom it is pledged.

Issued under Two Plans.—There are two plans under which equipment trust certificates are issued. One is known as

¹ See Dewing, *The Financial Policy of Corporations*, Vol. 1, Ch. V. This is probably the best short description of the history and investment standing of railroad equipment obligations. A more recent publication by Kenneth Duncan, *Equipment Obligations*, New York, 1924, covers the subject in more detail.

the "Philadelphia plan," under which the ownership and full legal title to the equipment is in the name of a corporation or an association which acts as trustee for the certificate-holders and which issues the certificates. The indebtedness is therefore not directly that of the railroad company. The company, however, usually guarantees the principal and interest and gets a lease of the equipment for the term of the indebtedness, paying a rental sufficient to meet interest and the principal at maturity of the equipment trust certificates. Thus, as long as the certificates are outstanding the equipment is leased by the trustee to the railroad company and the net rental that the company pays is in lieu of the interest and the instalment payments on the principal. Under the terms of the lease, when the interest and the instalments of the principal have been paid the equipment becomes the property of the railroad company.

The other plan of issuing equipment trust certificates is to give the railroad title to the equipment under a conditional sale agreement, in the same way as it is given title to mortgaged realty. Instead of the locomotives and cars being leased to the company, as under the Philadelphia plan, the railroad acknowledges that the equipment is mortgaged for the indebtedness and that it will pay the interest and principal to holders of the certificates. If interest and instalments of the principal are not paid the trustee can claim possession of the mortgaged property under foreclosure.

Investment Factors Relating to Railroad Bonds.—In studying these factors there should be considered, first, the railroad as a money-making enterprise, and, second, the investment position of the specific bond or stock issue under investigation. If a particular bond issue is studied, the investor should naturally look into such matters as the rights, claims, and privileges of the holders of the issue as set forth

in the mortgage indenture. He should inquire into the location and extent of the mortgaged property, whether it is the main line or a branch line, and whether the mortgage is a first or an inferior lien. He should also ascertain the authorized or maximum amount of the bonds that can be issued under the mortgage, the amount of the bonds that have been issued under the mortgage, the amount of other bonds outstanding having prior lien and the relations of such amounts to the value and earning capacity of the property. The conditions under which the unissued portion of the authorized maximum amount may be issued and sold should also be known. Such conditions are invariably found in the mortgage indentures.

Thus, assume that a mortgage covers a railroad line a thousand miles long. The amount of the bonds already issued and outstanding under the mortgage is \$10,000,000, out of a total authorized issue of \$25,000,000. The unissued portion can be put out only to acquire new railroad property or to make extensions or improvements on existing lines, and the rate at which additional bonds may be issued shall not be in excess of 75 per cent of the cost of such new extensions or improvements. To determine whether this property is highly mortgaged, it is usual to divide the \$10,000,000 by the one thousand miles and the resulting amount would be the rate per mile of bonds outstanding. If it is a case of a mortgaged main line of an important railway doing a large business and earning a substantial net income, a first issue amounting to \$10,000, or even as much as \$50,000 per mile, would not be considered excessive. But if the mortgage covers only a branch line and the indebtedness per mile on that section is, say, \$25,000, the amount would in all likelihood be excessive and in case of default of the bond issue the property would be given over to the bondholders who may not be able to operate it profitably or to dispose of it without a loss. Hence the security of principal would be impaired.

Statistical Data.—These matters are examined carefully by the statistical departments of banks and bondhouses. Important data relating to relative bond values are generally contained in the investment manuals and bond books noted in Appendix A at the end of the volume. Bond salesmen, investors, and bankers should know if the railroad is lightly or heavily mortgaged, whether its funded debt is increasing or decreasing, and whether the net earnings are growing or declining. Information in regard to the amount of mortgage in relation to the mileage is of very little value unless it also gives the character and quality of the railroad, its physical structure, and the earning power of the part of the property mortgaged.

A double-track railroad is usually more valuable than a single-track, and a three- or four-track road is usually worth more than a double-track. Prospective investors should also know the various physical assets covered by the mortgage, such as rolling stock, terminals, bridges, etc. Some of the mortgages cover valuable terminal property, as for example, the Grand Central Terminal and the Pennsylvania Terminal in New York City. The character of the bridges, the quality of the rails, *i.e.*, whether light or heavy, the kind of ballast and the quality of the ties, and other facts about the physical condition of the railroads should be explained to investors by expert bond analysts. The ordinary layman cannot go into all these details, but he should at least know something of the geographical location of the line and the character of its construction, as well as its capitalization and earnings. As a rule the cost of construction will be less on a line built through the prairie than on a line built through a country cut by mountains and rivers.

Studying the Railroad as a Whole.—In addition to having special information about the nature of the mortgaged property, the holder of railroad bonds should usually know the character of the railroad as a whole, the geographical section

which it traverses, and the relationship of the main line to its branches and to connecting railroads or other transportation facilities, as the so-called "feeders" of the main stem in many cases prove to be "suckers" which absorb profits rather than add to them.

A knowledge of the volume and nature of the traffic of a railroad is also quite essential in understanding the investment qualities of its bonds. If it has a high-grade traffic, *i.e.*, carries articles on which a high freight rate is charged, its profits are apt to be relatively larger than if its traffic is low grade and consists of such articles as coal and ore on which a low freight rate is charged. However, the fact that one railroad has a greater proportion of high-grade traffic than another does not indicate that its bonds are a better investment. If the quantity of low-grade traffic is very large, it may be a very profitable business if handled cheaply. These matters are considered in the next chapter.

Directors.—The business character of the directors is important in estimating the investment merits of a railroad's securities. Some men are considered particularly high grade. In fact much railroad success is due to the influence and activity of a few directors who because of their understanding of railroad problems can judge how to manage the property efficiently and economically. On the other hand, there are many directors of railroads who are unable or unwilling to give proper attention to the affairs of their company and investors in railroad securities have suffered at times on their account. It is essential for a railroad to have strong financial backing to assure its future. It is a well-known fact that certain large banking houses constantly stand behind a railroad and are ever ready to buy its securities and market them.

Railroad Systems.—There is unity of control among railroads. The Union Pacific through part ownership of the Union Pacific Company since 1909 controlled the financial

policy and the operations of the Illinois Central system. The Great Northern and the Northern Pacific systems, besides being affiliated through personal control of the same financial interests, have also a joint control of the Chicago, Burlington & Quincy system. The Missouri Pacific and the Western Pacific systems have also become affiliated through a joint control of the Denver and Rio Grande Western Railroad and through the personal influence of the same financial interests. Together, from an administrative viewpoint, they may be defined as a railroad system.

Thus, the system of grouping of railroads in the United States may be on the basis of administrative as well as traffic control. This administrative control may be lodged with individuals or with corporations, or with both jointly, as shown in the following list:

RAILROAD AFFILIATIONS

<i>The Hill Group</i>	Carolina, Clinchfield & Ohio
Great Northern	<i>Southern Pacific Group</i>
Northern Pacific	Southern Pacific Lines
Chicago, Burlington & Quincy	Central Pacific
<i>The Harriman Group</i>	Northwestern Pacific
Union Pacific	El Paso & Southwestern
Illinois Central	<i>Southern Railway (Morgan) Group</i>
Central of Georgia	The Southern Railway and leased lines
<i>Pennsylvania Group</i>	The Mobile & Ohio Railroad
Pennsylvania Lines	Alabama Great Southern
Norfolk & Western	Cincinnati, New Orleans & Texas Pacific
<i>Vanderbilt Group</i>	Georgia, Florida & Southern
New York Central Lines	<i>Missouri Pacific (Kuhn-Loeb) Group</i>
Reading (jointly with Baltimore & Ohio)	Missouri Pacific
Chicago & North Western System	Wabash
<i>Atlantic Coast Line (Walters) Group</i>	Denver & Rio Grande
Atlantic Coast Line	Texas & Pacific
Louisville & Nashville	International & Great Northern
	Gulf Coast Lines

<i>The Van Sweringen (Nickel Plate) Group</i>	<i>The Pere Marquette The Erie</i>
<i>The New York, Chicago & St. Louis (The Nickel Plate)</i>	<i>The Rockefeller Group</i>
<i>The Lake Erie & Western</i>	<i>The Western Maryland</i>
<i>The Chesapeake & Ohio</i>	<i>The Wheeling & Lake Erie</i>

The progress of unification in railroad administrative control is only partially indicated in the above grouping. In fact, of the entire steam railroad mileage of the United States, less than one-fourth may be termed independent. This situation is of particular significance to investors. The character and resources of the administrative control of any business enterprise are fundamental elements of its investment value. Profitable and satisfactory railroad operation requires both sound financial policy and efficient management. Adequate facilities for obtaining credit must also be at hand. This means that strong banking interests capable of procuring necessary capital funds are to be represented in the management. One of the conditions assisting in the absorption of many local lines by large railroad systems has been the inability of the independent companies to obtain with their own resources proper banking support.

Methods of System Unification.—The means of uniting separate railroad corporations into a system are various. The original method was through corporate merger. This was the plan followed by the New York Central when it consolidated some sixteen local lines operating between Albany and Buffalo. Legal restrictions and failure to satisfy dissenting shareholders have now rendered corporate consolidations exceedingly difficult. An example is afforded in the New York Central & Hudson River Railroad's endeavor to merge the New York & Harlem River Railroad with its own corporate lines. Though the shareholders of the latter have been offered \$175

for each share (\$50 par value) of stock, a substantial minority at this writing is holding out for better terms. The same situation has developed with reference to the Michigan Central Railroad, all but a small outstanding amount of whose shares are owned by the New York Central.

A further practical difficulty against mergers is the heavy capital outlay involved. When administrative control can be obtained through the acquisition of a substantial part (usually 51%) of the capital stock, the purpose of unification in most cases is gained as well as through complete merger. The investment outlay of the purchasing company, however, is very much less. Herein lies one of the chief reasons why railroad unification in the United States has taken the form of majority stock ownership. It has led to the creation of two distinct railroad administrative activities; one, consisting of the transportation operations of lines directly operated, the other relating to investments represented by stockholdings in subsidiary and affiliated companies. Thus, there are railroads which are in part "holding companies" and in part, "operating companies." The importance of distinguishing between these activities of railroad organizations cannot be too highly emphasized.

There are a few instances where the administrative control is lodged with a "holding company" operating no railroad mileage under its corporate name. The Reading Company was a type. This Company was organized in 1896 for the purposes of acquiring the Philadelphia & Reading Railroad Company and the Philadelphia Coal & Iron Company. Later, it acquired 53% of the capital stock of the Central Railroad of New Jersey. In addition to these large holdings, the Reading Company had miscellaneous holdings in street railways, navigation and mining companies. But the Reading Company, itself, is controlled jointly by the New York Central and the Baltimore & Ohio systems, each of which owns 21.7% of its

\$140,000,000 capital stock.² The Southern Pacific Company is also largely a holding corporation as it owns directly (*i.e.*, in fee) but 562 miles of railroad contrasted with about 13,000 miles of controlled lines.

Proposed Railroad Consolidations.—The attitude of the federal government toward railroad consolidations is indicated in the Transportation Act of 1920. Under the provisions of this important piece of legislation, the Interstate Commerce Commission is directed to prepare and adopt a plan for the consolidation of existing railroad properties into a limited number of competing systems and to authorize consolidation only when in harmony with its plans.

The primary purpose of urging railroad consolidations as provided by the Transportation Act is to eliminate the unequal financial positions of competitive carriers operating in the same territory. In the petitions of railroad companies for the general rate increases the settlement of the cases have been complicated by the unequal financial condition of competing carriers. The so-called "weak roads" were always confronted with the good financial showing of competing strong lines operating under the same rates as themselves. For this reason it was difficult for the carriers in a common territory to base their claims for higher compensation on their aggregate earnings.

Accordingly, a theory was evolved and strongly advocated by certain railroad interests that operating income of the strong roads in excess of a fair return upon the value of their railway property should be shared with their weak sisters. Congress partially accepted the "weak roads" argument. The new act provides that such carriers under the rates prescribed by the Commission as "receive a net railway operating income substantially and unreasonably in excess of a fair return upon

² Some of the properties of the Reading Company, notably the anthracite coal mines and the Jersey Central shares, have been segregated by a decree of the United States Supreme Court.

the value of their railroad property . . . shall hold such part of the excess . . . as trustee for, and shall pay it to the United States."

Aside from the primary purpose underlying the consolidation clause of the Transportation Act, there is a more important and underlying motive; one which concerns directly the future value and trend of railroad securities. This is the economy motive. From both the public and the railroad viewpoint, the chief motive of consolidation lies in lower costs of conducting the transportation service. This lower cost can be effected in two ways: (1) by more equitable distribution of traffic movement over existing lines through consolidations, and (2) by lowering unit costs in handling the railroad business as a whole.

There is no doubt that through consolidation of independent lines—particularly competing lines—traffic movement may be more economically distributed and routes which are now congested could be relieved of burdensome costs or of delays by diversion of business to the thinly patronized lines. The difficulty here, however, is that the law requires the maintenance of competition over existing traffic routes. The task of measuring or determining possible railroad economies through consolidations is equally as difficult as the maintenance of competition along existing routes of traffic. The work here is necessarily of a statistical nature. Railroad statistics, as shall be shown in the next chapter, are extremely troublesome to properly interpret because of the difficulty of obtaining satisfactory standard units of cost and of efficiency in operation. There are many facts outside the bare figures to be considered, and these factors are constantly changing in their relative importance.

While these problems are being slowly and cautiously considered by the Interstate Commerce Commission, there has been gradually developing a perceptible movement toward voluntary mergers and consolidations. As in these matters the Interstate

Commerce Commission under the law can exercise a veto power, such mergers, combinations and alliances as are permitted are in effect the action and will of governmental authority. The movement, therefore, should be closely watched by investment bankers and railroad security holders, since experience has proved that nothing is more patent in building up or tearing down railroad net earning capacity than a railroad company's expansion policy.

Railroad Valuation.—Of equal importance to railroad investors is the problem of railroad physical valuation. As a means of railroad rate adjustment, the Transportation Act of 1920 provides:

In the exercise of its power to prescribe just and reasonable rates, the Commission shall initiate, modify, establish or adjust such rates so that carriers as a whole (or as a whole in each of such groups or territories as the Commission may from time to time designate) will, under honest, efficient and economical management and reasonable expenditures for maintenance of way, structures and equipment, earn an aggregate annual net railway operating income equal, as nearly as may be, to a fair return upon the *aggregate value of the railway property* of such carriers held for and used in the services of transportation.

Incidentally, it should be noted that this provision adds nothing new in theory or fact. Under the law, public utilities are entitled to charge rates that give "a reasonable return on the value of their property." The perpetual difficulty has been to define clearly "reasonable return" and "fair value." Since 1914, the Interstate Commerce Commission under the valuation section of the Interstate Commerce Act has been endeavoring to establish by an actual inventory of railroad property a basis of fair value. No definite results have been attained up to the year 1925, nor is anything along this line to be finally and conclusively accomplished after years of litigation.

Under the terms of the Valuation Act, the Interstate Commerce Commission is to investigate, ascertain, and report

the value of all property owned or used by every common carrier subject to federal regulation. The Commission is required to report in detail as to each railroad property, "the original cost to date, the cost of reproduction new, the cost of reproduction less depreciation, and an analysis of the methods by which these several costs are obtained, and the reasons for their differences, if any."

The broad requirements of the act place a stupendous task on the commission and on the railroads. Because of the magnitude of the work, progress in outlining definite policies and procedure has been slow. Conferences between representatives of the Commission and of the railroads have resulted in definite and standard instructions regarding certain matters of procedure. But the important economic problems involved in the question of valuation at the time of this writing have not been worked out.

One of the principal sources of difficulty which will probably be met throughout the whole task of valuation is the lack of definite terminology. There is nothing in the congressional act to indicate that any limitation upon the meaning of "value" was intended, or that "value" in its broadest sense was not meant, or that the valuation is to be for any particular purpose. The legal theory of fair value is comparatively new. The Supreme Court in a frequently quoted opinion (*Smyth v. Ames*) has laid down certain elements of value, but has not weighed them in any definite scale.³ Moreover, in the numerous opinions of courts, commissions, and legislatures, there is a constant and seemingly unavoidable confusion of "cost" and "value." This has resulted in a distortion of the economic concept of value, and a substitution of engineering and accounting opinions for the standard dicta of classical

³ The elements of "fair value" as stated by Justice Harlan are: "The original cost of construction, the amount expended in permanent improvements, the amount and market value of bonds and stock, the present as compared with the original cost of construction, the probable earning capacity under particular rates prescribed by statute, and the sum required to meet operating expenses are *all matters for consideration* and are to be given such weight as is just and right."

economists. The terms "physical value" and "fair value"—now so flagrantly misused—have not the definiteness of concept which economists of the past generation considered essential for the establishment of an economic doctrine.

In the valuation of the Kansas City Southern⁴ and the Atlantic, Birmingham & Atlantic, it was reported that original-cost-to-date could not be definitely ascertained. Moreover, no estimates, data, or findings were reported with reference to "other elements of value." The "original and present cost of condemnation of land and damages or of purchase in excess of such original cost or present value," as required by the language of the Valuation Act, were likewise not reported. The Division of Valuation of the Interstate Commerce Commission seems to have prepared its estimates solely on engineering appraisals of actual physical property in use, leaving to the Commission itself or to the courts the determination of other matters, nearly all of which are in dispute.

The railroad companies which have been served with notices of the tentative valuation of their properties have filed, as required by law, written protests against the figures submitted to the Commission. These protests are based mainly on the following contentions:

1. The valuations are incomplete in that they deal merely with engineering appraisals. They exclude many "costs" incurred in the construction and development of the property.
2. Unwarranted deductions from value have been made on account of depreciation, the carriers contending that as long as a railroad property is efficiently and adequately maintained through repairs and renewals, there is no depreciation.

⁴ The first important tentative valuation report of the Interstate Commerce Commission comprises the Kansas City Southern system, having 841 miles running from Kansas City, Missouri, to the Gulf. The cost-of-reproduction of this system is placed at \$47,015,814 and the reproduction-cost-less-depreciation at \$39,867,902. These figures are regarded as extremely low in view of the fact that since 1900 about \$20,000,000 of new capital was applied in physical improvements.

3. No allowances have been made for abandoned property, although in many instances abandonments are as much the cost of the ordinary American railroad as is the cost of preliminary surveys in originally locating the line or the false work in building the bridges, and other expenses incurred in developing and operating a railroad plant.
4. The land values as determined by the Division of Valuation do not constitute the "present value" thereof since no allowances have been granted for cost of acquisition, severance damages, destruction or removal of buildings and the like.
5. Nothing has been added to reproduction value to represent the intangible or so-called "other elements of value" which the valuation act requires to be separately inventoried.
6. The working capital or quick assets of the carriers has not been inventoried, although such assets are an integral part of the railroad property and are essential to the operation of the railroad.

Since railroad rate adjustments and the proposed consolidations of railroads cannot be finally and adequately accomplished until these matters receive final court adjudication, the topic of railroad valuation is one requiring the interest and close attention of investors.

REFERENCES

- DUNCAN, K. *Equipment Obligations*. New York, D. Appleton & Co., 1924.
- HEFT, LOUIS. *Holder's of Railroad Bonds and Notes; Their Rights and Remedies*. New York, E. P. Dutton & Co., 1916, 419p.
- INTERSTATE COMMERCE COMMISSION. *Report on Consolidation of Railroads*. (63 I. C. C. Report No. 12964). Washington, 1921.
- RIPLEY, W. Z. *Railroads, Finance & Organization*. New York, Longmans, Green & Co., 1915, 638p.
- SAKOLSKI, A. M. *American Railroad Economics, a Textbook for Investors and Students*. New York, Macmillan Co., 1913, 205p.
- SPLAWN, W. M. W. *Consolidation of Railroads*. New York, Macmillan Co., 1925, 290p.

CHAPTER XXIV

RAILROAD SECURITIES

PHYSICAL AND TRAFFIC CHARACTERISTICS

Factors Determining Intrinsic Value.—The intrinsic value and investment qualities of railroad securities are determined by many factors. These comprise not only those mentioned in the previous chapter, which may be studied in reference to general railroad financial problems and with the aid of data compiled in the investment manuals, railroad mortgage maps, analyses, etc., but also the factors relating to the activities, financial structure and operating conditions of the individual companies. Information relating to these matters can be found to some extent in the annual reports of the railroad companies to their shareholders and to the Interstate Commerce Commission. The materials forming the basis of an intense analysis of railroad securities may be classified as follows:

1. *Data relating to the character of the transportation facilities.* Hereunder are analyzed the physical features of railroads in so far as they influence railroad operations and indicate the adjustment of transportation facilities to traffic demands.
2. *Data measuring efficiency and economy of operation.* These are the so-called traffic or "mileage" statistics, indicating the nature and volume of the traffic, and the cost in transporting and in handling the same, expressed under proper terms and in standard units.
3. *Data measuring revenues, expenses and net earnings.* Herein is comprised the study of the income account and profit and loss account.
4. *Data measuring the capital investment in relation to the*

corporate resources and liabilities. Analyses of the general balance sheet and, more particularly, capitalization are afforded by this class of material.

Physical Factors in Operations.—The geographical and physical location of a railroad and the quality and character of the superstructure, the quality and quantity of the rolling stock, the character of the terminal facilities, all are elements which, combined with wise financial policy, efficient management and a paying traffic determine the safety of the investment represented by the outstanding securities. The problems of determining the physical structure belong to the realm of the engineer. Investors and transportation students, however, are also concerned with these problems and cannot afford to neglect them. Public safety, operating efficiency and earning capacity require adequate physical facilities. Moreover, railroads are constantly demanding additional capital for extensions and betterments. It is with the object of assisting a proper judgment as to whether the interests of both security holders and the public are safeguarded in such matters that the following discussion of railroad physical features is presented.

DISTANCE.—Though there is considerable advantage to a railroad in having a shortest possible route between two important termini, the element of distance, unless pronounced, is probably the least important of the primary physical factors. Detours to avoid heavy construction cost or for the purpose of reaching cities and towns are frequently more economical than a direct route, constructed without reference to topography or industrial considerations. To follow a water course regardless of the windings and detours was the natural route of early railroad construction. Not only were easy gradients thus obtained, but the established centers of population and of traffic were also reached along these natural channels of trade. It seems, therefore, that much of the large expenditures for "cut-offs," viaducts and tunnels to shorten lines are not economically

justified. Such expenditures—caused largely by public demands or the rivalry of competing lines—are responsible in many instances for the diminishing rate of return on railroad capital. Railroad security holders, in consequence, have frequently undergone losses in thus promoting public convenience.

GRADES.—Grade is probably the principal feature of location affecting railroad operations. Steep grades by increasing the resistance to be overcome by the locomotive have an adverse effect on operating costs. When the incline of the roadbed rises but a few inches for each one hundred feet distance there is usually reduction of speed and an extra strain on the equipment. The use of additional locomotives to the train may be required. All this adds to the expense of fuel, wages and upkeep.

The constant reduction of grades has been a prominent feature of American railway structural development. A quarter of a century ago, a $\frac{1}{2}\%$ (0.05) grade (*i.e.*, a rise of one-half foot for each hundred feet distance) was considered the inferior limit that economy of operation on any line required. But on many of the railroads having a heavy traffic a one-half per cent grade is like a modern harbor channel only deep enough for coasting vessels. Much railroad capital has been accordingly expended to reduce grades from $\frac{1}{2}\%$ to 0.2%. The wisdom of such expenditure should be reflected in reduced hauling costs. If such a result is not obtained, the security holders suffer the consequences of the waste of capital.

CURVES.—Though affecting operating costs less than grades, curves are of no small consequence in the estimation of railroad physical qualities. Besides limiting speed of trains and lessening locomotive hauling power, curves cost more to maintain and to operate than straight stretches of track. They are also a fertile source of accidents. Curvature in railroad construction, therefore, is tolerated only because of

the heavy cost of its elimination. The same economic considerations apply here as in the case of grades.

ROADBED AND SUPERSTRUCTURE.—Physically a railroad is anything from a mud bank with two streaks of iron rust to a multi-tracked, rock-ballasted steel highway equipped with contrivances for safety, speed, comfort and economy. The wide disparities in physical structure not only confine comparisons among railroads within very narrow limits, but also render difficult the adoption or establishment of proper and satisfactory standards for measuring the adequacy of transportation facilities or of efficiency methods. Many factors are to be considered in these matters, and the relative values require close study for proper interpretation.

To describe all physical features bearing on operation is manifestly uncalled for here. The detrimental operating effects of inadequate physical facilities may be pointed out with reference to the Erie Railroad. Notwithstanding its large traffic expansion and its position as an important Eastern trunk line, the Erie because of inability to obtain capital on reasonable terms had been struggling along with inferior track and terminal facilities. On one stretch of track some fifty miles east of Chicago, the regular daily movement of business is reported to have included from 700 to 1,000 loaded eastbound freight cars, 500 to 700 westbound loaded freight cars and several passenger trains each way. A freight train, no matter how profitable it might be, is invariably sidetracked for a passenger train. This means that it is held "idle" on a siding to let the passenger train pass. If the two trains happen to be going in the same direction the delay to the freight train may be only a few minutes; if they are going in opposite directions the freight train may lose an hour or more. If there is a "mishap," a half-day tie-up may be the consequence. The losses from unavoidable delays and accidents devoured the Erie's revenue gained from additional business. In com-

peting with the Baltimore & Ohio, the New York Central and the Pennsylvania (having respectively long stretches of two, four and six track lines) the Erie, from the viewpoint of operating economy, has been seriously handicapped although handling in proportion to its mileage more freight business than the New York Central system which has four tracks all the way from New York to Chicago. Thus, Erie was not able to serve the shipper and the public *at as low a cost as is possible under the best operating conditions*. This is the problem. Railroad-earning power rests not alone on performing the transportation service, but performing it efficiently and economically.

Study of Traffic Statistics.—For purposes of analysis, railroad traffic statistics may be grouped under two main categories:

1. Those indicating the nature of the traffic, *i.e.*, the volume and the classes of freight and the number and kinds of passengers carried.
2. Those indicating efficiency and economy in conducting the transportation service.

The Measurement of Volume and Class of Traffic.—Herein are included all data dealing with

- (a) The classes and kinds of commodities carried,
- (b) The average rate received for each and all classes,
- (c) The average density of the traffic, and
- (d) The average distance each unit is conveyed.

Obviously, over these matters the railroad managers have very little direct control. A railroad is compelled to accept for transportation the kind of freight offered and to convey this freight to a designated station on its lines, or, when the point of destination is not on its own lines, to a convenient transfer station. The compensation received for each class and kind of service is determined largely by competitive and

economic forces. Each factor—class of commodity, weight, length of haul, and rate—affects earning power. It is for this reason that the details of these factors are so carefully collected and analyzed and that the so-called “ton-mile” and “passenger-mile” statistics have been developed. The ton-mile, meaning one ton of freight carried one mile, is the most commonly used traffic unit. It combines the two transportation cost factors weight (or number in the case of passengers) and distance. Only the resulting data are alike useful to railroad managers, to investors and to the public.

The Ton-Mile Averages.—The ton-mile and other fundamental traffic units are employed as averages. It is the characteristic of the average to give no information of the differences and disparities of the individual units on which it is based. The ton-mile accordingly gives no indication of the classes and kinds of commodities carried, the character of the service rendered or the gross receipts and rate received from each class. It covers all kinds of traffic, both “through” and “local,” as well as “high grade” and “low grade.” The Atchison, Topeka & Sante Fe Railroad, for example, has a large fruit and vegetable traffic which it hauls all the way from California to the Atlantic States. The Western Maryland and the Chesapeake & Ohio railroads carry mainly coal, sand and iron ore, all bulk articles that are hauled but relatively short distances. In the first case the haul is long and the rate received per ton is high. In the second case the rate is low and the haul is short because the large bulk of the commodities in relation to their low monetary value places an economic limit on the transportation charge that enters into their market price. Accordingly, in every summarized statistical statement based on ton-mile averages full consideration should be given to the relative proportions of the various classes of commodities carried.

Classification of Commodity Traffic.—The railroads, since 1908 have followed the Interstate Commerce Commission's

classification of railroad freight tonnage, namely, Products of Agriculture, Products of Animals, Products of Mines, Products of Forests, of Manufacture, Merchandise and Miscellaneous. With the exception of merchandise, the classes comprise only carload shipments. It is evident that, although in some instances the requirements of a general comparison are met with in this classification, the wide disparities among the commodities within each class preclude a correct indication of the real character or of the profitableness of the group. Thus, the Atchison's freight traffic consists of about 28% in agricultural products, of which fruit and vegetables are about one-fourth. Measured by receipts, however, and probably by profits, the fruit business is a very much larger proportion. Similarly, dressed meats are included under Products of Animals, along with live stock, hides, bone, fertilizer and the like. The length of the haul as well as the receipts per ton-mile of dressed meats, however, is far in excess of the average for all commodities in the group.

Essential to correct measurement of railroad traffic is a knowledge of the relative proportions of *carload* and *less-than-carload* freight. Some commodities as coal and pig iron are always shipped in carload lots only. Many other commodities (*e.g.*, dry goods) are largely forwarded in "less-than-carload" lots (L. C. L. freight). The consuming capacity of the territory traversed frequently determines how far a railroad company can enjoy carload lot shipments. Accordingly, two railroad systems traversing different localities, though carrying the same proportions of similar commodities, may sustain wide differences in the average rate and the net profit received from the same class of freight. In the case of carload shipments, the freight rate on a ton-mile basis, largely because of economies in handling, is naturally less than when the same commodity is shipped as a less-than-carload lot. The profit on carload shipments to the railroad, however, may be relatively greater.

Diversification of Traffic.—A railroad system may be largely dependent for revenue on one class or kind of commodity, or it may have a diversified traffic, *i.e.*, one class of freight is not disproportionately large or small. Certain commodities enter more largely into freight movement than others not only by reason of their limited areas of production and widespread demand, but also because transportation is an essential element in the preparation for their consumption. Moreover, raw materials and bulky articles, such as mine and forest products, naturally tend to outweigh lighter products.

A railroad hauling a diversified tonnage is generally considered as a more favorable investment than one whose traffic consists almost exclusively of one commodity. Yet, the financial success of many leading railroad systems has been due to the large revenue afforded by heavy traffic of some important commodity. Thus, the heavy coal tonnage of the "anthracite" and the "bituminous" roads, and the ore tonnage of lines extending from Lake Erie to Pittsburgh, in connection with other freight movement, furnishes these railroads a heavy business which is conducive to low operating costs per traffic unit. Fluctuations in the predominant item of tonnage, however, occasionally impair the earnings of these companies. Inasmuch as stability of earning power is a principal source of financial security, railroad managers aim to acquire as diversified tonnage as may be possible in the territory traversed.

A further disadvantage of the predominance of one kind of traffic is the unequal movement in both directions. This necessitates the extra expense of the "back haul" of empty cars. In some cases a "return tonnage" has been developed to offset this expense. Thus, the ore carrying lines supplying the Pittsburgh district have a return tonnage of coal to the lakes. Similarly, the Delaware, Lackawanna & Western has succeeded in building up a large import traffic over its lines from the seaboard to interior points. Even though this equal-

ization of traffic flow may not reduce the back haul of empty cars it, at least, avoids the necessity of all empty car trains.¹

Traffic Density.—Large tonnage is the fundamental factor of profitable railroad operation. Railroad companies having their lines well supplied with traffic, other things being equal, enjoy relatively lower operating costs than lines with light tonnage. An exception generally arises when there are inadequate facilities for handling and moving a large business. Accordingly, traffic expansion in volume and in density has been attended generally by corresponding heavier expenditures to provide the machinery of railroad operation. Increasing density has brought larger engines, more capacious cars and better constructed roadbed and track. In other words, adequate physical facilities permit the traffic as it becomes of a more wholesale character to be dealt with in a more wholesale and consequently in a more economical manner. If this cannot be done, the advantages of heavy traffic may be entirely lost to the security holders.

The measurement of traffic volume, or traffic density, as it is technically known, when taken in relation to physical factors is thus of the highest importance in analyzing operating results. Traffic density is ordinarily computed by dividing

¹ An instance of improved diversification through gradual change in the relative proportions of each class of freight tonnage is furnished by the following table showing the percentage of certain products to the total freight hauled by Atchison, Topeka & Santa Fe system:

YEAR ENDED JUNE 30TH	Per	Cent	Total Tonnage	
	1901 %	to 1904 %	1911 %	1921 %
Grain Products	18.82	16.46	7.50	14.73
Other Agricultural Products	12.05	12.50	14.83	13.96
Products of Animals	10.03	8.99	7.74	4.70
Products of Mines	30.94	30.06	28.36	21.12
Products of Forests	7.98	12.28	11.11	8.73
Manufactures and Merchandise	20.18	19.71	30.46	30.76
	100.00	100.00	100.00	100.00
Freight receipts per ton-mile	1.007c	1.002c	1.028c	1.544c

Thirty years ago, the Atchison was classed as a "granger," i.e., grain carrier, because of its large ratio of grain tonnage. This ratio has since declined but the loss in grain traffic has been compensated by a gain in manufactured products and package goods, usually classed as "high-grade" freight.

the total ton-miles by the miles of road operated in a railroad system. Thus, if a railroad moved 1,000,000 tons of freight an average distance per ton of 100 miles the ton-mileage would amount to 100,000,000 ton-miles. If the total length of line operated is 200 miles, then the freight density would be 500,000 ton-miles-per-mile-of-road. Passenger traffic density is measured in the same way. It is the quotient of the passenger miles divided by the total miles operated for passenger business.

These items are at best crude averages for indicating the extent of the railroad business. As has been already pointed out, it is manifestly impossible, in view of the great variety of commodities transported and the complicated services rendered by railroad companies, to assemble in a single average the record of actual work performed. Moreover, the handling of tonnage in increasing bulk is not necessarily reflected in increased revenues unless the proportion of the various classes of commodities remains unchanged. Different rates are received for transportation of different commodities. However, unless there has been a substantial change in the character of a railroad company's tonnage, the average ton-mile-per-mile-of-line-operated is undoubtedly the best index of railroad business. Whether this progress is reflected in increased net earnings depends on the adequacy of the physical facilities, the operating efficiency, and the maintenance of rates and charges.

Average Length of Haul.—Along with traffic density, the average haul per ton is an influencing factor in railroad earnings. It is obtained by dividing the total ton-miles (*i.e.*, weight times distance) by the total tonnage (weight) received for shipment during a definite period. If railroad services were merely confined to moving commodities without any handling at terminals, and without other service the varying length of the haul would not greatly influence operating costs or freight rates. That railroad rates between different points do not vary directly with the distance is due very largely to

uniformity of terminal charges regardless of the haul. Hence, it follows that the greater the average haul the smaller proportionately will be the operating costs per unit of freight. Each railroad, therefore, seeks to obtain long-haul business even though the rates on a ton-mile basis are lower than on short-haul tonnage.

Statistics for Measuring Operating Economy and Efficiency.—These widely used statistics have been adopted primarily to assist railroad managers in the intelligent operation of their lines. They, however, furnish information of the service given to the public as well as of managerial efficiency. Railroad rivalry and competition, and the necessity of maintaining railroad credit to provide for new capital requirements create a desire on the part of operating officials to make “a good showing.” In this way the standard units for measuring operating costs have been developed. These units when interpreted properly become an effective test of efficiency as well as a means of administrative control.

The principal standard units applied in the measurement of operating efficiency and economy are the so-called “mileage costs.” These comprise deductions from the ton-mile and passenger-mile, the locomotive-mile, the train-mile and the car-mile averages. In handling these standard units, or in using them for purposes of comparison, extreme caution is essential. Possible changes and differences in physical facilities, in the character of the traffic and in managerial policy must be constantly kept in mind. Even within the same railroad system it is frequently decidedly unfair to measure operating results of one division against another on the sole basis of “mileage” averages. Such comparisons would take for granted similar physical, traffic, labor and climatic conditions as well as similarity in methods of supervision and in administrative skill.

The principal standard units, employed in measuring railroad operating efficiency and economy are:

1. The average train load of freight and passengers obtained by dividing ton-mileage and passenger-mileage by train mileage.
2. The average car load, freight and passenger, obtained by dividing ton-mileage and passenger-mileage by respective car-mileage.
3. Ton-miles per engine hour.
4. The average length of haul for passengers and freight respectively, obtained by dividing passenger-mileage and ton-mileage by the total number of passengers carried and the total tons moved.
5. The average receipts per ton-mile and per passenger-mile, obtained by dividing freight receipts by ton-miles and passenger receipts by passenger miles.³

A number of the units or combinations of units are used by railroad and investment statisticians, but it is not the purpose here to consider in detail the methods of gauging railroad operations. As stated in the *Railroad Age* (June 17, 1924) with reference to the Missouri Pacific Company:

It is usually difficult to prove operating efficiency by means of operating statistics unless one engages in a rather elaborate analysis covering all factors. The difficulty is that the figures vary with the traffic, some increasing and some decreasing with increased ton-miles. It is very seldom that one can find such a clean-cut picture of increased efficiency. In modern railroad statistical analysis it is customary to emphasize that train load is but one factor of several or to point out that heavy trainloading is not a success if by any chance trains are unduly delayed in movement. One notices, therefore, the unit of net ton-miles per train-hour, which is considered to be a more adequate unit than train load alone.

³ The foregoing is quoted in Ray Morris' "Railroad Administration" (page 228) from a report of a special commission of the British Board of Trade.

REFERENCES

- ELY, OWEN. *Railway Rates and Cost of Service*. Boston, Houghton Mifflin Co., 1924, 148p.
- HAINES, HENRY S. *Efficient Railway Transportation*. New York, Macmillan Co., 1919, 709p.
- HANEY, LEWIS H. *The Business of Railway Transportation*. New York, Ronald Press Co., 1923, 613p.
- MORRIS, RAY. *Railroad Administration*. New York, D. Appleton & Co., 1911, 309p.
- SAKOLSKI, A. M. *American Railroad Economics*. New York, Macmillan Co., 1913.
- WOODLOCK, T. F. *The Anatomy of a Railroad Report*. Garden City, N. Y., Doubleday, Page & Co. (A pioneer work for investors on the analysis of railroad statistics and accounts but now out of print.)

CHAPTER XXV

RAILROAD SECURITIES

EARNINGS AND CAPITALIZATION

Railroad Financial Statements.—In tracing the affairs and transactions of American railroad companies, the public have a less difficult task than in an analysis of other business enterprises. In railroad operations there is a standardization and uniformity of accounting methods that insures an intelligible presentation of financial returns. The 20th section of the Interstate Commerce Act, approved June 29, 1906, authorized the Interstate Commerce Commission to prescribe and supervise a uniform system of accounting for each class of interstate common carriers. Beginning with the year ended June 30, 1908, a uniform accounting system was installed for interstate railroad companies. The Interstate Commerce Commission's agents have had since this time legal authority to inspect railroad accounts and records.

Previous to the enforcement of a uniform accounting system the leading railroad systems had followed similar methods of bookkeeping. Uniformity was not compulsory, however, and departure from standard practice was permitted. Each railroad was at liberty to follow its own system without regard to the rights and interests of any class of security holders. Occasional receiverships when large profits and equities were reported were due to lax accounting methods.

In drafting a system of railroad accounts, two motives appear to have actuated the Interstate Commerce Commission. The first was the desire to know actual operating costs so as to have a basis of equitable rate making. Cost data, to be authentic and incontrovertible, require the keeping of accounts in

a prescribed and uniform manner, and their publication in accurate and intelligent form. The second motive back of the uniform accounting system is the desire for reliable statistical information correctly portraying the financial status and fiscal operations of the great transportation agencies. This probably more than any other consideration guided the Commission in its constructive work in providing a prescribed system of accounts.

Principal Accounting Regulations.—The controlling motives of the Interstate Commerce Commission produced a system of railroad accounts designed more to meet the broader and comprehensive requirements of public regulation than to specifically serve the purposes and desires of railroad managers and security holders. The aim to have the operating costs furnish a rate-making basis led to rigid regulations in certain accounting details which previously had been dealt with independently in accordance with the individual financial policy of each railroad. Important among these regulations are :

1. The absolute separation of rail transportation operations from ancillary operations.
2. The exclusion of taxes from among the direct costs of operation.
3. The establishment of joint facilities accounts on a uniform basis.
4. The inclusion of depreciation charges as a direct operating expense.
5. Rigid classification of capital expenditures.
6. Uniform practice in crediting premiums received and charging discounts paid in the sale of capital securities.
7. Strict accounting regulations regarding charging losses from the abandonment of physical property.

The enforcement of these regulations prescribed with a view to determining actual operating costs has met with some serious criticism and complaint on the part of railroad managers. Regarding the first three items, there was little objec-

tion, although the resulting bookkeeping adjustments entailed many difficulties. It is well known that railroads are engaged directly in a number of operations other than transportation by rail. For the most part, these operations are intimately connected with, or are ancillary to, the business of transporting passengers and freight. The revenue as well as the expense incident to them nevertheless are sufficiently distinct from the revenues and expenses which accrue on account of rail transportation to permit separate accounting. This distinction has led to the recognition of a class of accounts designed as "outside operations." They cover the operations of harbor terminals, ferries, elevators, electric light and power plants, stock yards and the like. The motive for requiring a separate set of accounts for this class of activities is expressed in the following official definition for "outside operations":

Outside operations are facilities operated or services rendered by a railroad other than those incidental to transportation by rail, the revenues and expenses of which, if included in the carrier's accounts dealing with transportation by rail, would impair the significance of statistics prepared from such accounts.

The Income Account.—The prescribed form of the railroad income statement is shown in Figure 5, page 272. The classification of items of operating revenue and expense affords opportunity for detailed comparative analysis of any railroad's business with a view to determining the trend of earnings and the standards of operating efficiency. Of course, not all the items are of equal importance. Freight and passenger revenues far exceed the other classes of earnings, which, largely because of their incidental character, may be conveniently grouped together as "miscellaneous" operating revenues. Similarly, among the operating expenses, the two classes of maintenance costs and the transportation expenses form the great bulk of the expenditures. Traffic expenses

cover merely the costs incurred in retaining and fostering the business of the railroad. The general expenses are the unallocated administrative costs of the company. They cover general office and legal expenses, insurance and relief department costs. The items grouped under "additional income" are inconsiderable amounts compared with those of "rail" opera-

ANN ARBOR RAILROAD			
<i>Calendar Years—</i>	1924	1923	1922
Freight.....	\$4,864,464	\$4,859,746	\$4,305,008
Passenger.....	441,123	484,066	509,843
Mail, express, etc.....	226,599	258,763	238,310
Total operating revenues.....	\$5,532,186	\$5,602,575	\$5,053,161
Maintenance of way and structures \$	669,420	\$ 756,771	\$ 615,525
Maintenance of equipment.....	1,051,071	1,217,296	971,940
Traffic expenses.....	113,096	108,134	111,591
Transportation expenses.....	2,283,078	2,304,795	2,225,249
General expenses.....	173,943	155,939	195,261
Miscellaneous operations.....	272	165	189
Transportation for investment....	.....	Cr.101	Cr.363
Total operating expenses.....	\$4,290,879	\$4,542,999	\$4,119,391
Net operating revenue.....	\$1,241,307	\$1,059,575	\$ 933,770
Taxes, etc.....	289,997	253,683	261,050
Operating income.....	\$ 951,309	\$ 805,892	\$ 672,720
Other income.....	115,088	117,533	166,344
Gross income.....	\$1,066,397	\$ 923,425	\$ 839,063
Hire of equipment, etc.....	\$ 300,612	\$ 444,394	\$ 385,734
Interest on funded debt.....	380,229	358,436	351,421
Interest on unfunded d bt.....	33,609	28,448	39,192
Miscellaneous.....	15,089	12,137	16,537
Total deductions.....	\$ 729,540	\$ 843,416	\$ 792,884
Net income.....	\$ 336,857	\$ 80,008	\$ 46,179

Figure 9. Railroad Income Statement

tions. The details, therefore, have no particular significance. The grouping and consistent arrangement of the items that follow the operating accounts dispenses with the necessity for further comment on the prescribed form of the income statement. A correct understanding of the substance of the various groups of income and outgo is as essential in gauging real earning capacity as their logical and systematic sequence.

Operating Expenses.—As an indication of efficiency affecting managerial skill and financial uniformity, operating expenses of railroads are carefully studied. This arises not because operating expenses are a more important factor in the determination of net income than gross revenues. In fact, as stated in a previous chapter, under normal conditions an increase in gross earnings is a greater financial advantage than proportionate reduction in operating revenues. This is due to the fixed nature of a large part of railroad operating costs; since only a relatively small part of railroad expenses fluctuate with the amount of business done, the operating costs cannot always be materially altered to meet smaller revenues during dull periods. In view of this condition, it is obvious that the total operating charges in relation to each traffic unit diminish as the traffic grows larger and increase as the traffic becomes smaller. A greater net return, therefore, is afforded by expansion of revenues than by reduction of expenses. Operating expenses, however, are, at least, partly subject to the control of railroad managers, whereas, the revenues are usually the result of business conditions and natural forces. More attention is, therefore, given to the analysis of costs of operation than to fluctuations in gross earnings.¹

¹ Wellington in his standard treatise on Railway Location places the proportion of expenses that are fixed regardless of amount of traffic at 50% of total operating costs; the proportion of expenses that are affected only slightly by increase of traffic at 40% and the proportion of expenses affected directly and proportionately by increase or decrease of traffic at 10%. His illustration of the effects of this condition on net income through increase or decrease of revenues is as follows:

	Percentage of total Revenue	Normal Basis	Increase of 10% in Gross Revenue	Decrease of 10% in Gross Revenue
Gross Earnings	100.0%	\$7,000	\$7,700	\$6,300
Exp. Unaffected	33.3%	2,333	2,333	2,333
“ Slightly Affected	26.7%	1,867	1,870	1,850
“ Fully “	6.7%	467	510	420
Total Expenses		4,667	4,713	4,603
Fixed Charges	27.7%	1,800	1,800	1,800
Total	92.4%	6,467	6,513	6,403
Balance	7.6%	533	1,187	103 deficit

From this illustration, it will be seen that an increase of 10% in gross revenue produces an increase of 100% in the balance available for dividends, whereas, a decrease of 10% in revenues causes a deficit.

Classification of Operating Expenses.—For analytical purposes, the five sub-divisions of operating expenses adopted by the Interstate Commerce Commission, *viz.*: Maintenance of Way and Structures; Maintenance of Equipment; Conducting Transportation; Traffic, and General Expenses, may be classed under two groups: (1) maintenance expenses embracing the first two sub-divisions, and (2) transportation expenses, which include all the other operating costs. The basis of separating maintenance from other costs is simple. Maintenance outlays can be increased, reduced or deferred considerably by the will of the management, whereas other operating costs are not as greatly influenced by managerial policy. Money that goes into maintenance, moreover, retains or enlarges the value of the assets. Excessive maintenance is, therefore, like a reserve fund, to be drawn upon in lean times. Excessive expenditure for handling and moving traffic, however, or in administration is once and for all time spent without means of future recovery. Though liberal maintenance outlay may not be reflected in increased operating efficiency, never is increased operating efficiency gained by permitting the physical property to deteriorate. Accordingly, fluctuations in maintenance costs demand close analysis by investors.

Transportation Costs.—The transportation costs are the expense items directly incurred in handling and moving traffic. As has already been pointed out, they differ in character from maintenance expenses; first, because they cannot be arbitrarily adjusted to meet lower revenues, and secondly, because when once paid out no value remains in the property to represent the outlay. These fundamental distinctions make it evident that all possible economy consistent with service should be practiced in conducting transportation. As many operating costs are stationary, increase in gross earnings, other things being equal, should result in a smaller ratio of operating expense to earn-

ings. The ratio of the cost of conducting transportation to operating revenues is, therefore, a good index of efficiency when not accounted for by changes in rates or in operating conditions. As between different railroads, however, caution must be exercised in using the operating ratio as an economy index. Local conditions as well as disparities in kind and in amount of traffic affect the expenses of conducting transportation to a greater degree than maintenance costs. Fast and frequent freight service requiring light train-loads increase transportation costs. Similarly, heavy grades, insufficient trackage, weak bridges and the like cause losses in speed and delays in service. All this means larger wage and fuel outlays than when physical facilities permit the maximum speed and the minimum time in performing the transportation service. On the other hand, lower transportation costs resulting from improved physical facilities may be offset by corresponding increases in permanent capital investment. The heavier interest and dividend charges on capital investment may, therefore, render nugatory the saving in operating expense. The great problem always before the railroad financier is to determine how far the saving in transportation and in other costs arising from proposed improvements and betterments will outstrip the fixed charges of the new capital investment required for these purposes.

The impossibility of physically tracing the results of transportation expenses on the property affords opportunities for waste and extravagance. Consequently, their close supervision and proper measurement are of great value to railroad managers and investors. This is particularly true at the present time when railroad operations are circumscribed by government regulations and susceptible to the scrutiny of expert analysts and efficiency engineers. The Interstate Commerce Commission has publicly announced that no increase in freight rates would be sanctioned until it was proved that all possible

efforts towards economy in operations had been made by the companies.²

Through economy experiments conducted by the railroads, and through the activities of efficient executives, some splendid results in reduction of transportation costs have been obtained. In view of the government's attitude in rate-making further progress along these lines may be expected. The investor in railroad securities will enjoy the benefits, however, only in so far as the economies effected by the company in which he is concerned are equal to or in advance of the general standards obtaining among all railroad companies.

Net Income and Its Distribution.—The "Operating Income," as indicated on page 324, is the balance after the deduction of "Taxes" from "New Operating Revenues." The item represents the financial result obtained from the direct operation of the railroad property, without reference to investment or to other activities, and without deduction of capital charges in the form of interest, rentals and dividends. It, therefore, purports to exhibit the net earning capacity of a railroad as an operating company. If American railroad corporations had confined their activities to operating rail transportation facilities directly under their own corporate organizations, the operating income item in the income account would attract the closest interest of security holders. From this "balance" alone would then come the interest and dividend payments. However, because of the acquisition of legally independent and separately operated lines, and because of the development of activities not directly connected with or incidental to transportation, additional sources of revenue are added from which payments for the use of capital are drawn.

Investment or Other Income.—Attention has already been called to the fact that American railroad companies are "hold-

² See *In re Investigation of Advances in Rates by Carriers in Official Classification Territory* No. 3400.

ing" concerns, owning securities of other companies as well as operating directly their own corporate lines. The results of these investment activities affect financial progress as much as the direct railroad operating results. In fact, the ownership of subsidiaries affords opportunities of misinterpretation of equities and earning power. For this reason, it is frequently necessary to combine the accounts of railroad companies comprising a "system" in order properly to determine the actual earnings and financial condition of the parent or holding company.

It is readily apparent that a company controlling other railroads through stock ownership can arbitrarily draw on the profits and surplus of its subsidiaries. A correct computation of earning power, therefore, is not limited to analysis of the parent company's accounts. The subsidiaries must also be closely examined to ascertain whether the income credited to security holdings represents proper application of the net earnings of the controlled corporation. Investment income may be credited without being earned, and it may be earned and not credited.

The Union Pacific Railroad is notable for its investment activities. The policy of the late Mr. Harriman in developing and extending Union Pacific activities was through acquisition of large blocks of stocks in competing and connecting railroad systems. The asset value of these investment holdings amounted on December 1923 to a book value in the neighborhood of \$207,000,000, exclusive of \$45,000,000 of securities of affiliated railroad companies owned. The income from this source was approximately \$16,000,000, compared with net railroad income (before deduction of fixed charges) of \$40,280,793. The Union Pacific's big return from stocks of other roads held in its treasury has been responsible for a good deal of misconception as to the earning power of the railroad property. As a matter of fact, that company's return on its bonds and capital stock as measured by its own rail-

road operations is not unusually large. In 1923, it was slightly more than two-thirds of the amount needed for its 10% common stock dividends.

Deductions from Corporate Income.—These are familiarly known as the “fixed charges,” and include rentals, interest, amortization of bond discount and certain sinking fund payments. Rentals represent, in addition to part of car-hire expense, the periodical payments for lease or use of railroad lines, terminals and other borrowed facilities, and are therefore analogous to interest payments. The arrangements under which one railroad operates or uses the facilities of another railroad are matter of contract. Frequently, the rental is nothing more than an agreement to guarantee the payment of stipulated rates on part or all of the securities of the leased concern. In other instances, no fixed rental is specified but the surplus earnings of the leased line may be distributed or apportioned between the owners and the lessee according to fixed agreement. Under this arrangement the rental is not essentially a fixed charge though classed under the deductions from net income.

The nature of railroad interest charges requires little explanation. These are generally more fixed in character than the other deductions from net income. The amount each year, accordingly, can be calculated in advance. Several railroads have income bonds outstanding the interest on which is not required to be paid unless earned. This provision would seem to remove the payments on these obligations from the category of “fixed charges.” However, no separate classification is made for their interest charge in the prescribed form of income account. Similarly, the interest paid on unfunded indebtedness, as well as the cost of exchange and discount transactions are included among the deductions from income along with the fixed interest charges on capital securities.

Sinking fund and other debt amortization charges are a

relatively unimportant item among the deductions from net income. Railroads, as a rule, make no substantial provisions for debt amortization, and, even when made, the charge is not deducted from current net income. The exception is in the case of "car trust" indebtedness in which a part of the principal is paid off periodically so as to be wholly amortized before the equipment is worn out.

Net Corporate Income and the Margin of Safety.—After the deduction of all proper charges against current income, the surplus earnings, if any (except as limited by the recapture provision of the Transportation Act of 1920), can be disposed of in accordance with the judgment of the company's directors.³

This surplus is designated by the Interstate Commerce Commission as "net corporate income." Considered in relation to the funded obligations outstanding, this item determines to some extent the investment values of these securities. Considered solely with reference to the interest requirements, it is commonly termed the "margin of safety." Thus, if a company has but one bond issue bearing an annual interest requirement of \$100,000, and the net corporate income available for such interest payment for a series of years has been approximately \$200,000 annually, the "margin of safety" is said to be 100%, *i.e.*, double the interest charge. As already pointed out, most companies have numbers of different bond issues ranging in priority as to claim upon net income, so that the "margin of safety" is frequently calculated with reference to each issue. The relative market standing of each issue, other things being equal, is largely gauged by the size of the ratio. Thus, the First Consolidated Mortgage 5% Bonds of the Southern Railway, having claim upon net income prior to several other direct funded obligations of the company, have

³ As previously pointed out on page 302, the transportation Act of 1920 requires railroad companies reporting net operating income in excess of 6% on property valuation to apply one-half thereof to a reserve fund and the remaining half to a general railroad contingent fund.

sold at 101 when the Development and General Mortgage 4% Bonds, which are not so well secured, sold at slightly less than 74. The difference in the interest rate or maturity, therefore, does not fully account for the disparity in price. Similarly, the First Mortgage 5% Gold Bonds of the Wabash Railroad sold in January 1925, as high as 101½, whereas the Second Mortgage 5% Bonds of the company having the same maturity sold at 95. Both of the issues are amply secured by assets and earnings, but the first mortgage issue having priority over the second mortgage bonds naturally commands a better market.

The question as to an "ideal" margin of safety in the analysis of railroad income statements has no practical significance. The wide disparities in operating conditions affecting income stability do not permit the establishment of a definite rule. As already stated, the relative market prices of railroad securities make a margin of 25% above fixed charges in one railroad company's income statement a better basis of security value than a 50% margin of another line. Thus, the Northern Pacific Company in the fiscal year 1923 had a margin of safety of but 88% above its fixed interest requirements, whereas the Southern Railway had a margin of 117%. It would be difficult to argue that the Southern Railway's bonds have a better investment value than similar issues of the Northern Pacific. The same is true when comparison is made between the margin of safety of the Union Pacific securities and those of the Pennsylvania Railroad. The former has been earning its interest charges from three to four times over, whereas the charges of the Pennsylvania were hardly doubled. Stability of earnings is a factor in market values eliminating the necessity of a large margin of safety of net income above fixed charges.

Study of Railroad Capitalization.—Among most American railroads, capitalization (*i.e.*, the aggregate face value of

outstanding stocks, bonds and other securities, as stated in the liability column of the general balance sheet) is as much due to arbitrary adjustments, necessitated by reorganizations, mergers and credit conditions, as to the receipt of cash paid in by the public. The regulation and control of railroad capitalization by governmental authorities is of relatively recent development in the United States. Until within the last two decades, railroad companies, with but few exceptions, were permitted to issue shares and securities whenever and in whatever manner they desired. The evils resulting from this liberal policy have been sufficiently magnified by writers on railroad finance, so that no further consideration is needed in these pages.⁴

Nature of Railroad Capital Expenditure.—Unlike many industrial concerns, railroads, as a rule, have no sinking fund or other provisions for the amortization and extinguishment of capital liabilities. With but few exceptions, railroad stocks and bonds are issued as permanent and perpetual obligations. Bonds may mature on a fixed date, but, with few and unimportant exceptions, their refunding is necessary. Accordingly when injudicious financing or mismanagement require capitalization readjustment, it is accomplished only through receivership or reorganization.

The capital outlay of railroads is enormous in proportion to the business done. This capital is "sunk" into fixed form on the supposition that a certain minimum traffic will be moved at prescribed rates. These rates cannot be changed arbitrarily. A railroad, therefore, cannot readily recover reduced earnings by increasing its charges. If an ordinary manufacturing or commercial business gets into financial difficulties because of unwieldy capitalization it may cease operations and be liquidated. But when a railroad company has exhausted its credit, is unable to raise money for new extensions because of poor

⁴ See Ripley, *Railroads, Finance and Organization*.

earnings, and cannot improve facilities or reduce rates to meet competition, it is a lasting financial burden. Even though poorly paying it generally continues operation. There is, therefore, a clear public interest that railroad companies should be strong financially. In order that they may be strong, they must put aside from income the cost of actual replacements of property. They must also make ample provision for depreciation and for obsolescence of property. They must even provide for the contingency that portions of the property may cease to earn an investment return. Thus, the cost of a branch line built to tap coal mines, which are expected to become exhausted in twenty-five years, is properly a charge against earnings in this period. Many such lines have continued to be operated even after the coal or timber depletion has occurred, but without earning interest charges or in a few cases without earning direct operating expense.⁵

The Measurement of Capitalization.—The principal stumbling block and the chief source of statistical errors in the measurement of railroad capitalization is the difficulty of clearly separating the portion of outstanding capital securities representing investment in a company's own railroad property from the portion covering the cost of investments in other companies or other enterprises. It is manifestly erroneous to measure the total capitalization of a modern railroad system of a per mile basis, when a large part of this capitalization arises from the acquisition of subsidiary railroads and of other properties not a part of its own mileage. Railroad capitalization statistics accordingly should distinguish the "net capitalization" from "gross capitalization."

Net capitalization is commonly determined by deducting the items under "Other Investments" and also the par value of the company's own unsold securities from the gross cap-

⁵ The problem of the abandonment of unprofitable branch lines has been taken up seriously by the railroads since the war. Public opposition to such abandonments has greatly diminished since the automobile truck and bus has come into general use.

italization, *i.e.*, the capital liabilities in the general balance sheet. Applied to the Erie Railroad (December 31, 1923) the process is as follows:

Capital Stock Outstanding.....	\$176,385,300
Bonded and Secured Debt.....	314,892,550
Gross Capitalization	\$491,277,850
Less: Pledged Bonds included in above.....	63,021,000
Deduct: Investments in Other Properties.....	\$425,256,850
	143,239,950
Net Capitalization	\$182,016,900

Since the investments of railroads other than in their own corporate lines have not always been acquired directly or wholly from the proceeds of the sale or the exchange of securities, this method is obviously not applicable in every case. It is, however, an improvement over the widely used method of comparing the relative capitalization of railroads by merely dividing the capital liabilities, *i.e.*, stocks and bonds of each company, by its total railroad mileage.

Capitalization and Leased Mileage.—Erroneous computations of relative capitalization of individual railroads are frequently made because of neglect to consider leased and rented mileage. Theoretically, a rental charge is as much a payment for the use of capital as interest and dividends, and a railroad company at times has the choice of purchasing a company by selling its own securities, or operating it under a guaranty of rental. It has become the practice of railroad statisticians to add the capitalized value of these rentals to the capital liabilities of the operating companies. Thus, if the rentals aggregate \$100,000 annually and the prevailing rate for capital funds is 5%, a sum of \$2,000,000 would be added to the companies' constructive capitalization. But the terms under which one railroad company operates the property or uses the facilities of another frequently require payments which are partly operating expenses and partly rentals. The joint facilities ac-

counts instituted by the Interstate Commerce Commission were for the purpose of requiring the railroads to allocate payments and receipts arising out of the use of leased and joint facilities accordingly as such payments or receipts represent charges or credits to operating expenses and charges or credits for the use of capital. This provision with reference to many railroad leases is practically impossible of execution. Accordingly, a computation of capitalization so as to include the rented and leased property cannot always be made by merely capitalizing the rentals or by adding the outstanding capitalization of the leased lines.

Style of Capitalization.—From an investment standpoint, the relative proportions of the various classes of securities is of far greater import than aggregate amount of capitalization. When a railroad system is earning a good return on all classes of its outstanding securities, it is largely a question of financial policy whether bonds or whether capital stock shall be sold to acquire additional capital. Companies that are unable to distribute dividends to shareholders, however, cannot readily issue new capital stock for the reason that investors will not buy it, except at much below the face value. Accordingly, the only recourse of these companies in providing new capital through issue of securities is to sell obligations bearing a fixed interest charge. This enlarges the ratio of funded debt to the total capitalization. It also means an immutable burden on current earnings.

Trend of Railroad Capitalization.—The record of railroad financing in the years 1900 to 1923 seems to indicate that bonded indebtedness is growing at a much faster rate than capital stock. The continuation of this trend, however, is not certain. The history of American railroad finance shows that first one and then the other of the two groups of securities excels in popularity. This is because of varying money market and investment conditions.

Increase of stock rather than bonds has been assisted at different times through the issue of convertible bonds. Thus, the Atchison has issued up to July 1, 1912, a total of \$147,-711,000 convertible bonds, of which all but about \$8,000,000 have been converted at the option of holders into common stock. The Norfolk & Western's financing by means of convertible bonds is another good illustration of successful financing of this kind. At the end of 1923 practically the total amount of an issue of \$25,569,000 of 4% convertible bonds of the Norfolk & Western, dated June 1, 1907, and another issue of \$13,300,000 put out in 1912 have been converted into stock, thus reducing the fixed charges arising from these obligations. It should be noted that this method of securing money cheaply and of reducing future fixed charges later is dependent on ability to earn a substantial dividend on capital stock. In other words, the net dividend return on the stock generally must be a good margin above the interest rate attached to the bond in order that the stock should sell higher than the bonds and conversion thus become profitable to the bondholders.⁶

In view of the influence of capitalization changes on railroad credit, the importance of the investor studying railroad capital requirements cannot be magnified unduly. Because of extensions and improvements due to heavier traffic, to increasing competition and to public demands for efficient transportation service, additional capital expenditure of American railroads is continuous. Railroad magnates and financiers have repeatedly called attention to the heavy demands for funds necessary to enable the railroads to handle properly the constantly expanding traffic. All growing enterprises have constant need of money, and as most of the new railroad capital

⁶ An illustration of a successful effort to bring about the conversion of bonds into stock was afforded by the New York Central in 1924. This company had outstanding since 1915 an issue of \$100,000,000 convertible 6% bonds, convertible into stock at 105 before May, 1925. By increasing the dividend rate from 6% to 7% annually, the market price of the stock advanced to a point that made conversions profitable to the bondholders. Consequently they have been converted.

must be obtained from private investors, these naturally will not place their funds in railroad securities unless the prospects for safety of income and principal are fair and reasonably assured. In other words, they will put their money into railroads only as long as the investment returns in railroad properties are as good and as well secured as in other enterprises. This competition of outside securities is an element in the cost of capital to the railroads. It must be successfully met if transportation systems are to continue developing and expanding.

Legal Restrictions on Railroad Securities as Savings Bank Investments.—The savings bank laws of New York, Massachusetts and a number of other states provide that no bonds of any railroad corporation shall be available for legal investment by savings banks unless the railroad issuing or guaranteeing such bonds shall have been paying 4% per annum during a period of five or more years upon all its outstanding capital stock. These laws generally provide further, that the outstanding capital stock of the railroads shall not be less than one-third of its mortgage indebtedness during the period these dividends have been paid. Moreover, the classes of railroad bonds in which savings banks are permitted to invest are usually limited to prior lien obligations. It will be seen that the above provisions require the railroads, if their bonds are to have access to the market supplied by these banks, to pay regular dividends and that their outstanding bonds shall not exceed a given relation to their capital stock. The seriousness of this situation with respect to the market of railroad obligations must be recognized when consideration is given to the fact that most railroad companies have exhausted their first mortgage privileges and that trustees of estates, trust companies, and conservative investors are bound, either in law or for their own protection, to limit their holdings to savings bank investments. In Appendix C (page 449) is given a

brief synopsis of state laws with reference to investment by savings banks in railroad securities.

Commercial Banks and Insurance Company Investments in Railroad Securities.—Besides savings banks, which own more than one billion of railroad securities, all classes of banks and insurance companies are permitted to invest in railroad securities. According to the report of the Comptroller of the Currency, December 1st, 1924, the national banks on June 30, 1924, held railroad bonds of the value of \$573,571,000. The state chartered commercial banks on the same date held \$61,246,000 and the loan and trust companies \$254,772,000. Accordingly these three groups of financial institutions held almost \$890,000,000 of railroad bonded indebtedness. Life insurance companies about the same time had two billions of assets in the same class of securities, whereas the fire insurance companies, according to general estimates based on the latest report of the New York State Insurance Department, held increasing amount of railroad stocks and bonds. To these holdings should be added the large investments in railroads of charitable, scientific and educational institutions. For two generations the demand for capital by the railroads has been furnished not only by individual investors but by organizations seeking safety of principal above all other considerations in placing their funds.

REFERENCES

- ADAMS, H. C. *Railroad Accounting*. New York, Henry Holt & Co.
HOOPER, W. E. *Railroad Accounting*. New York, D. Appleton & Co., 1915, 461p.
INTERSTATE COMMERCE COMMISSION. *Classifications of Income Account, Profit and Loss Accounts and General Balance Sheet*. (Issued in pamphlet form.) Washington, D. C.
SAKOLSKI, *op. cit.*
WERMUTH, C. E. *Railroad Accounts & Statistics*. New York, Prentice-Hall, Inc., 1924.

CHAPTER XXVI

PUBLIC UTILITY SECURITIES

Distinctive Features.—In the preceding chapter a brief description was given of the different classes of railroad bonds, such as debenture bonds, collateral trust bonds, and equipment trust certificates. The classification and descriptions apply equally to public utility bonds, since these securities are issued under similar conditions and for the same purposes as the railroad obligations. The subject matter of the present chapter, therefore, will be limited largely to the distinctive features of the public utility companies.

It is a question whether in the grouping of investment securities, public utility issues should be separated as a distinct class from railroads. A railroad is a public service corporation as much as a gas company or a telephone company. There are several considerations, however, in connection with public service corporations other than railroads which in discussions of bond investment deserve to be treated separately.

Franchise.—In the first place a public utility company must generally obtain from some local public authority a franchise, which is defined as a right to use a public highway or public property in common with the public. Of course, a railroad operates under franchises, too, but it is usually incorporated under a general legislative act and there are no specific grants other than those contained in the legislation. Railroads, therefore, are not concerned primarily with local authorities in securing their franchises.

Moreover, public service corporations as a rule operate on street surfaces and under public streets, *i.e.*, on public property, whereas a railroad operates on its own right of way and

for the most part uses its own property exclusively. There are cases, however, where railroads operate through streets. In obtaining this grant, the railroad may be obliged to operate under the conditions laid down in a local franchise, or in accordance with special contracts made with political bodies sanctioning the use of public property.

The acceptance of a franchise by a public utility company is generally considered as placing the company under the regulations imposed by the authority granting the franchise. Therefore, it should always be borne in mind in studying public utility bonds as investments that the activities of the issuing companies are subject to severe public regulation.

Localized Operation.—A second point of distinction between public utilities and railroads lies in the fact that the former are usually localized in their operations, whereas railroads extend over a large geographical area. A gas company, for example, is usually restricted in its operation to one city or section of a city. Its interests are bound up with the municipality. If the municipality declines and disappears, the public utility passes away also. If economic conditions become very bad in the municipality, the public utilities operating there are likely to suffer in some way. There is not a wide geographical area of operation and a consequent wide distribution of investment risks as there is in the case of railroad companies.

A railroad company operating through an extended territory does not usually suffer a severe loss if one or more branch lines are abandoned or an important industry within its territory ceases operations. Moreover, a company operating over a large area is not likely to suffer an irreparable loss if it experiences an earthquake or if its buildings are damaged by fire or a local disaster. Public utility companies with localized operations do not enjoy the same freedom from the possibility of total collapse. A good illustration is the effect of the earth-

quake at San Francisco in 1906. In this calamity the railroads did not suffer as much damage relatively as the other public service companies.

To eliminate the risks of localization there have been organized within the last two decades public utility holding companies, whose purpose it is to own, control, and operate public service corporations in a number of different localities. Because such holding companies operate through corporations whose properties are scattered in different geographical sections and over wide areas, the development of an unfavorable political attitude on the part of the public, unexpected damage, or any other bad turn in the affairs of one locality may be offset by favorable developments in the affairs of other localities.¹

Independent Units.—There is yet another quite important distinction between railroads and public utility companies. The latter are usually operated independently of one another. Their business originates with themselves, and they distribute their services or products directly to consumers. Railroads are not independent units. Each of them forms but a part of one vast transportation system. Consequently, railroads have a continuous interchange of traffic with each other, which leads to standardization of their properties. Thus, there is a uniform track gauge and the same kinds and classes of cars and locomotives, constructed with interchangeable parts, so that each can use the equipment of the others. This is not true of the local public utilities, except perhaps power plants and telephone and telegraph companies. One big corporation largely controls the telephone business in the United States, and in this instance there is more or less uniformity and standardization throughout the industry. In some cases, it is true, traction lines interchange services and equipment, but such interchange is more an exception than the rule.

¹ See Dewing, *The Financial Policy of Corporations*, Vol. IV, Chap. 5.

Development of Public Utilities.—The operation of public utility companies or municipal monopolies, as they have been called, had its beginning in the United States in Boston in 1652 when the first public water supply of record in this country was inaugurated. This simple reservoir was later incorporated into the "Water Works Company."² The first private undertaking of this nature was the waterworks of Christopher Christiansen in Bethlehem, Pa., in 1761, which was followed by another in Providence, R. I., in 1772. During the Revolution and for several years thereafter, there is no record of other water works enterprises in the United States. In the meantime, however, New York City, which had for a number of years leased the privilege of operating ferries to individuals and corporations, had under contemplation a water distribution system, which was finally undertaken by the Manhattan Company, organized in 1799 by Aaron Burr.³

The successful manufacture and distribution of gas for illuminating purposes was demonstrated in the early years of the nineteenth century. Here, again, Boston citizens were the pioneers in America. In 1822, the Massachusetts Legislature passed an act incorporating the Boston Gas Light Company, but it was not until 1829 that the first public gas lamp was lighted.⁴ In the meantime enterprises in other cities were developing, so that within less than a generation, privately operated public gas works were scattered throughout the leading centers of population. Unlike water works, these for the most part have remained as private corporate enterprises. Street railway systems, the first of which was incorporated in 1831 in New York as the New York & Harlem Railroad, have likewise remained largely in private hands notwithstanding the municipal ownership agitation which began in the early nineties.

Electric companies for illuminating and later for both illu-

² See Bemis, *Municipal Monopolies*, p. 12.

³ This corporation has continued as "The Bank of the Manhattan Company."

⁴ See article "The Boston Consolidation Gas Co." in *Annals*, May 1908, page 61.

mination and power purposes were first created in American cities and towns about 1870, and local telephone companies came into prominence between 1880 and 1890. Thus, the number and variety of public utility companies have increased. Their importance and necessity to community life, together with the vast amount of capital sunk into the enterprises have brought into prominence the serious questions of public utility competition, regulation, control and protection of investment.

Public Service Commissions.—In the early periods of public utility development, there was little regulation for the safeguarding of the rights of the public or of the companies. As in the case of railroads, the people desired the services of these private enterprises and in order to encourage and stimulate their growth left them largely unhampered by legislative restrictions. Problems of rates, profits and privileges, however, gradually arose with the increase in the number of enterprises and the larger dependence of the municipalities on their services, causing both legal and political complications, and necessitating definite policies of public administrative control. This control has been established in almost all the states by the creation of regulatory or supervisory commissions with definite powers granted by legislative enactment. In a number of states, commission control of railroads had been early introduced as a substitute for direct legislative control. The powers of these commissions were, therefore, readily extended to other public service corporations. Though the powers of the public service commissions differ to some degree in the various states, in the main, they are concerned with the following activities: (1) Franchises; (2) Rates and services; (3) Security issues, and (4) Accounts and reports.

The powers of the commissions in granting and regulating franchises as a rule aim to prevent unnecessary duplication of investment in utility enterprises where the public welfare demands a recognition of monopoly and unified control. Its ob-

ject is also to prevent loss and waste of capital in enterprises not adequately demanded as a public convenience or necessary. In the matter of rates and services, the commissions for the most part have the power of fixing or limiting charges for services. These powers, however, are restricted by the provision in the Fifth Amendment to the Federal Constitution that "No person shall be deprived of life, liberty or property without due process of law nor shall public property be taken for public use without just compensation." The courts have applied this provision to the protection of public utility property values against confiscation or depreciation through rate regulation. Accordingly, it is held that a public service corporation without its own consent cannot be made through regulation to charge rates which will cause its earnings to fall below a reasonable return on the fair value of its property. This judicial *dictum*, so frequently reiterated in public utility controversies, has given rise to the numerous public utility valuations throughout the country and other serious and complicated problems of public control.

The regulation of security issues and the control of public utility companies' accounts and reports by commissions are a more recent development than franchise and rate supervision. About one-half of the states have already placed the supervision of the issue of stocks and bonds under commission authority. It is expected that the others will later follow this policy. In the leading states, the commissions prescribe definite financial standards for approval of security issues, including the preliminary investigation and property valuation and detailed supervision of the disposition of the proceeds. The regulation of the companies' accounts and reports is a logical sequence of this authority, since accurate and adequate data are essential to a proper control of capitalization, rates and service. All this tends to enhance the investment qualities of public utility securities issued under close commission supervision.

Effect of Public Regulation.—The stability of investments in public utility companies has been enhanced through the general adoption of definite policies of public regulation and supervision. All of the leading states of the Union have been fairly successful with public service commission regulation and supervision. The formation of these commissions on the whole will result advantageously to the investor. In addition to promoting publicity with regard to the affairs of public utility corporations, these commissions do away with much of the direct interference of legislatures in the business of the corporations. The companies are also relieved from the necessity of cringing to local politicians or political parties. Moreover, the men appointed to these commissions in most cases are selected from among experts well acquainted with the management and operation of public service corporations. Through constant contact with the affairs of the corporation they learn to judge the business properly, and experience shows that they are not oblivious to the rights of security-holders. Securities carrying the stamp of a public commission's approval are likely to have the qualities of a sound investment.

The public service commissions have also promoted uniformity and standardization in accounting methods, so that the financial results of public utility operations under their supervision are now correctly and intelligently set forth and can be readily compared.

Public Utility Holding Companies.—As stated above in order to eliminate some of the uncertainties and risks of public utility investment there have developed in recent years the public utility holding companies, which, by distributing investments over a large geographical area and by operating systematically and economically the various companies that they control, have been able to enlarge the earning power and on the strength of this increase to sell their own stocks or bonds. Several large holding companies, which control widely scat-

tered gas plants, electric light and power plants, and other large public undertakings, and which employ the best technical skill have eliminated the risks attaching to small localized concerns and have stabilized the earnings of the subsidiary companies as a whole.

Such holding companies can expand their operations into almost any field. Some have gone into the oil business and have offset the losses they experienced from the abnormal conditions resulting from the war. Many independent public service companies have suffered during and since the late war because of their inability to vary their business to meet new conditions. The market value of the securities of these companies has depreciated accordingly, whereas the holding concern, because of diversification of its activities, has continued to prosper.

The grouping of a number of local companies supplying services to the public under one general management has been, on the whole, dictated by the soundest economic and financial motives, though many of these combinations have been merely for stock-jobbing or "promotion" purposes. Combination is a step in the evolution of modern business enterprise. Industrial development demands more economical operation of a producing company. This, in turn, requires financing on a broader scale than is possible with the local concern. Wholesale financing and operation through a holding company has been the logical result. Added to the financial advantages thus created are the opportunities afforded through the instrumentality of the holding company of employing the best technical skill and the use of the highest and most approved types of equipment. When all this is combined with the element of wider distribution of investment risk, it may be stated with some degree of certainty that the development of the holding company has been one of the foremost means of popularizing investment in public utilities in the United States. This does

not mean, however, that the securities of all holding companies are sound investments.

Magnitude of Public Utility Investment.—Public utilities are not only among the most stable and essential but among the largest industries requiring investment capital. The electric power and light industry alone has a capital investment of something like \$6,000,000,000. The electric railway industry, which has probably reached its highest development, represents a similar capital outlay, while water, gas, telephone and telegraph companies bring a total of public utility investment to approximately \$18,000,000,000, or almost as large as that of the steam railroads of the country.

The greatest progress in public utility development, with the exception of that of water works and the telegraph, has been made during the last two decades. For example, the electric power and light industry in 1902, according to the United States Census, had an investment of only about \$628,000,000, as contrasted with its present investment of approximately \$6,000,000. The gross earnings of the electric power and light companies in 1902 aggregated approximately \$86,000,000, as contrasted with present annual gross earnings of more than \$1,000,000,000. In 1902 the output of the electric generating stations was about 2,508,000,000 kilowatt-hours, as compared with an output of about 45,000,000,000 kilowatt-hours during 1922. It has since greatly increased.

Popularity as Investments.—Public utility securities, like those of the railroads, from their beginning, have been viewed favorably by an ever increasing number of investors. If this had not been true, it would have been impossible for the utilities in so relatively short a time to have built up an aggregate investment in the neighborhood of \$18,000,000,000. At first the investors in public utility securities naturally were restricted to a relatively few people, usually resident in the localities where the utilities operated, but as the companies progressed

and the volume of their securities grew and they became better known, the large bond and stock distributing houses became more and more interested in them and in this way a rapidly increasing number of people was attracted to this field of investment. The high investment qualities of public utility stocks and bonds is indicated by the fact that the oldest, largest and most conservative banking houses of the country have been distributors of this class of securities for more than twenty years.

Future Expansion of Utilities.—Although the expansion of the utilities during the relatively short period of their existence has been phenomenal, it must not be thought that their growth is nearing an end. They have a much greater future before them. Particularly is this true of the electric power and light industry. Let no one think that the business field of the electric companies has by any means approached the saturation point and that from now on there will be only a plodding development.

SECURITY OFFERINGS 1920—1924
PUBLIC UTILITIES

Year	BOND AND NOTES			STOCKS		
	New Capital	Refunding	Total	New Capital	Refunding	Total
1920	\$327,024,352	\$109,089,248	\$436,113,500	\$55,314,700	\$5,394,250	\$60,708,950
1921	374,847,000	170,593,000	545,440,000	117,087,940	8,557,280	125,645,220
1922	450,520,339	227,635,661	678,156,000	275,715,170	26,556,625	302,271,795
1923	637,533,671	239,329,429	876,863,100	250,457,058	11,076,000	261,533,058
1924	829,050,123	179,133,777	1,008,183,900	496,550,704	24,905,223	521,455,927

RAILROADS

Year	BONDS AND NOTES			STOCKS		
	New Capital	Refunding	Total	New Capital	Refunding	Total
1920	\$322,379,500	\$55,500,000	\$377,879,500	.....	.....	.....
1921	352,665,920	302,622,580	655,288,500	.....	.....	.....
1922	496,839,680	127,723,570	624,563,250	\$26,968,100	.....	\$26,968,100
1923	437,194,000	53,733,000	490,927,000	27,322,450	.....	27,322,450
1924	723,653,800	160,679,900	884,333,700	55,963,269	.....	55,963,269

An indication of the increasing demand of public utility companies for investment capital as compared with the new capital applied to railroads is afforded by the foregoing table

of the aggregate public offerings of new securities of these two classes of corporations during the years, 1920-1924 inclusive.⁵

It can be seen that in 1924, the combined new issues of public utility obligations and stocks offered to the public aggregated \$1,529,639,827, of which \$1,325,600,827 represented new capital and not refunding or substitution operations. The amount of railroad securities publicly offered in the same year (comprising both obligations and stocks) amounted to \$940,296,968, and, excluding refunding, etc., to \$779,617,069. The new offerings of public utilities representing fresh applications of capital accordingly in 1924 were almost double that of railroads. A similar situation existed in the previous three years.

Another characteristic of recent public utility as contrasted with railroad financing in recent years has been the larger amount of new public utility securities represented by stock. Because of the inability of most railroads to sell their shares at or above par value, these companies, as already pointed out in a previous chapter, have had to resort to bond issues in order to obtain new capital funds. Because of expanding revenues due to the growing needs for their services, the utilities have been showing in the aggregate a margin of earnings above operating expenses which permits the payment of dividends on their shares, sufficient in many cases to make these attractive for investment purchase.

Trend of Public Utility Investments.—Although utilities have been growing in popularity as investments, like all industries, there is a drift of capital away from certain types to others experiencing larger development and showing greater earning power. Electric railways, in particular, are losing ground in the investment field. These concerns, because of motor bus and other competition, have in many instances suffered losses in revenues, or because of inability to increase earnings in relation to operating costs, have shown during the

⁵ Based on compilation of the *Commercial and Financial Chronicle*.

last decade small returns on capital investment. In a number of cases, in which their business is confined to traction operation, they have fallen into a condition of bankruptcy. There are many instances, however, where street and interurban railways are operated as subsidiaries or branches of lighting and power concerns and the support from these sources has enabled them to obtain needed capital to continue and expand their services. Electric power companies, as a whole, have been demonstrating a larger degree of present and prospective earning capacity, and for this reason, their securities are more eagerly sought by all classes of investors.

Reasons for the increasing popularity of electric light and power securities during the last two decades are the economy in the use of electrical power for industrial and domestic purposes and the successful development of long distance transmission of electrical current. The central station electric light and power business represents a development of slightly more than a quarter-century, yet in this period it has become one of the greatest of national industries and its phenomenal progress is regarded as still in its infancy stage. Like the great railroad systems of the continent, it is proposed to "link up" the individual power concerns into one vast superpower system, whereby surplus energy developed in one region may be transferred to other sections where there is not enough to meet current demands. The harnessing of water-power for its conversion into electrical energy on an economical scale, though not displacing to any great degree the old steam method of production, gives promise of an almost unlimited growth. Almost 9,000,000 of hydro-horsepower has been already put to use electrically in the United States, and, as nothing like the maximum possible utilization has been reached, none can safely predict the limit to the economical expansion of the power transmission industry.

Gas companies have been holding their relatively long period of popularity as investments largely because of the new

uses for their service and the less costly methods of gas manufacture. Originally gas was used for illuminating purposes, and although this is still maintained as a profitable service in many localities despite electrical competition, the development of the use of gas for fuel, heating and power, and industrial purposes, has more than offset the revenue losses arising from the reduction in gas illumination. It is estimated that between 75% and 90% of gas is consumed for cooking and heating purposes, a diversification of service that has come about in a quarter-century. As the furnishing of gas and electricity covers the same competitive field and takes place in the same localities there has been a general tendency toward merger and combination in these industries.

REFERENCES

- American Academy of Political and Social Science. State Regulation of Public Utilities. *The Annals*, Vol. 53, May, 1914.
- BEMIS, EDWARD W. (EDITOR). *Municipal Monopolies*. New York, Thomas Y. Crowell and Co., 1899. (Containing interesting historical accounts of the development of public utilities.)
- IGNATIUS, M. B. *Financing of Public Service Corporations*. New York, Ronald Press Co., 1918, 508p.
- WILCOX, D. F. *Municipal Franchises*. New York, McGraw-Hill Publishing Co., 1911, 2 vol.

CHAPTER XXVII

PUBLIC UTILITY SECURITIES

TESTS OF VALUES

The Permanent Need for the Service.—A leading investment factor to be considered in connection with public utility securities is the nature of the public need for the company's service. When a domestic service is to be performed in a large population the problem of the permanency or extent of the need is not a serious one, as in the case of a costly electric light plant in a small town or agricultural district. Certain corporations have extended electric transmission lines hundreds of miles from populated sections and into mining camps at heavy capital cost. The safety of the principal of the bonds of these corporations will depend largely on the need that can be developed for the power furnished by these transmission lines. Matters of this kind are now closely looked into by both engineers and investment bankers before purchasing wholesale public utility securities. Investigations of this nature include an analysis of the consuming locality's population growth, industry and commercial importance.

After the need for the service has been determined, the next step is to examine whether the need will be permanent. There might be a present need for a ferry service at some point across the East River adjoining New York City, but if in a few years a bridge is built across the river, the need for the ferry service would cease and the ferries would have to be scrapped, as in the case of many others in the past. Gas companies that were organized some years ago in the hopes of a perpetual and expanding need for their services were in some cases not very successful because of the competition resulting from the intro-

duction of electrical illumination. As pointed out in the previous chapter gas companies in a number of cities have gone into the electrical business or become merged with the electrical enterprises in order to control this competition and prevent their own displacement. Thus, in New York City the New York Edison Company and other lighting companies are owned or controlled by the Consolidated Gas Company, and have proven a good and profitable acquisition for the latter.

Franchise Analysis.—The primary test of a public utility investment is the franchise under which the company or its subsidiaries perform their services. These franchises are grants of conditional rights and privileges under legislative authority of the states. They may be received directly from the state legislature by legal enactment or from general state or municipal agencies. The courts have held that franchises, whenever granted in accordance with law, are contracts and cannot be impaired by subsequent legislation. Even in instances where bribery or fraudulent practices were employed to obtain a franchise, the courts have upheld the grant as a valid contract. Thus, a franchise granted to the Broadway Surface Railroad Company by the New York City Board of Aldermen in 1885 was obtained through bribery, but the New York Court of Appeals, notwithstanding the company's charter was annulled in 1886, held that its franchise or interest granted in the street was perpetual and indefeasible, and hence survived the corporation.¹

The chief provisions in a public utility franchise requiring the scrutiny of investors are the following:

1. The nature and kinds of services to be performed.
2. The duration of the grant.
3. The exclusiveness of the service (monopoly).
4. Territory prescribed, including required extensions.

¹ See "Municipal Franchises in New York," in Bemis, *Municipal Monopolies*, page 377.

5. Rates and charges.
6. Recapture provisions.
7. Franchise liabilities or obligations.

Each will be considered briefly in turn.

1. A franchise may be granted to supply a definite and restricted service, and none other. Thus, a company may receive the right to use the streets and other public property for supplying electric illumination. This was considered the only service applicable to the early electric companies. The use of electricity for power purposes, as previously stated, was a later development, so that it became a question in many cases whether original electric franchises permitted the use of the streets for supplying of current for power. The same problem developed in connection with the substitution of horse drawn street cars by mechanical motive power. An instance of a broad grant of powers by a municipality to a corporation is the Chicago Subway franchise. It was originally intended that this enterprise should construct subways for pipes and mains laid under the streets. It has been used, however, chiefly for the transportation of freight, though this service is not mentioned in the franchise.

2. The duration or term of the franchise undoubtedly receives more attention from investors than any other provision. The corporation may be granted the right to use public property and to operate a public service without any limitation as to time. These franchises are called "perpetual," and, as pointed out on a previous page, when granted by public authority without the power of recall or cancellation, they constitute an irrevocable contract that cannot be impaired by legislation. In the early days, the perpetual franchise was the rule. Nowadays, it is the exception. Thus, the first street car companies in many cases were originally granted a perpetual right to run cars through the streets. Early water and gas companies likewise had no time limit placed on the period

of their operations. The modern policy is to limit the term of the franchise, or to grant a so-called "indeterminate permit" under which the company is granted the right to use the streets or other public property during good behavior, the city or state reserving the right to revoke the franchise or to purchase or otherwise take over the utility.

Wisconsin was the first state to use the indeterminate permit as a general policy, though the earliest street railway franchises in Massachusetts were of this type. All existing franchises of utilities in Wisconsin, regardless of term limitation, were revoked under a law enacted in 1911, and the companies have been given indeterminate permits. Indiana has enacted a similar law, though in this state the acceptance of an "indeterminate permit," in lieu of a term franchise is optional with the companies. Several other states make similar grants to utilities, and Congress has adopted this type of franchise for utilities in the District of Columbia and other places under federal jurisdiction.

The public utility bondholder is peculiarly interested in knowing the restrictions on the duration of the franchise with reference to the company's bonds he holds. It would be an almost insensible risk buying or holding a bond of a corporation the franchise of which expires before or within a few years after the bond comes due. Suppose one holds a bond due in 1945 of a company whose franchise expires in 1948. If the company is unable or does not expect to renew the franchise, it is not likely to maintain the property in good physical condition, which will thus become worthless as security for the bond.

3. Of no less import than duration, to the investor, is the protection of franchise grants from competition of other concerns performing the same service. The exclusiveness of the right to perform a definite kind of service was generally ignored in many of the early franchise grants with the result

that duplication of services in the same territory and disastrous competition have been quite a common experience. During the period following the expiration of the Bell telephone patents, independent or "home" telephone companies sprang into existence in all parts of the country. Aside from the waste of capital, the greatest evil was the resulting public inconvenience. The lessons gained from these and other experiences of public utility competition have led to legislation in most states giving their respective public service commissions power to protect a company in a monopoly of its territory against a would-be competitor by requiring both private and municipal utilities to secure from these a "certificate of public convenience and necessity" before beginning operations. Unless there is a law of this kind, a public utility company not possessing a franchise giving it the exclusive right to perform a public service in its territory may be forced into bankruptcy or despair by wasteful competition.²

4. Restriction of territory in which a public utility may operate hampers its progress and expansion, and prevents the economic advantages of large scale production. The handicap has been overcome in many cases through mergers or control of adjoining properties by the same corporate interests. Thus, the New York Edison Company in New York City operates under many franchises, some of which have overlapping territory.³ The Consolidated Gas Company of New York, together with a number of other local utilities in large cities likewise obtain their franchise rights from original grants received by its merged and subsidiary companies. A difficulty arising from this process of absorption is the unequal terms of the several franchises under which the company operates. An expiration of a franchise in part of its territory may cause as much com-

² Illustrations of wasteful competition between municipal owned and privately owned utilities have occurred in San Francisco in the case of street railways and in Cleveland in the case of both street railways and lighting plants.

³ See Report on Electrical Franchises in Greater New York, published in 1910 Annual Report of the Public Service Commission of New York, 1st District.

plication and inconvenience to the utility as the termination of all its franchise powers.

But territorial restriction of franchises may not prove half as burdensome as excessive area to which a company may be bound to supply its service under its grant of privileges. If a utility company is required to extend its tracks, or its mains into outlying and sparsely populated sections of a community at a time when the revenues from these extensions are not sufficient to cover the interest on the capital outlay, a decreasing rate of return will result to the operations as a whole. Many city traction lines have suffered thus. As a cause of public utility mortality, it seems to be even more potent than the confinement of operations to a limited area.

5. The limitations of rates and charges are rarely found in the most modern types of public utility franchises. Where they still exist, they are a handicap to the companies. The difficulties of the Interborough Rapid Transit Company and other street railways that have accepted contracts to operate on a five cent fare furnishes good illustrations. A public utility company which agrees to limit its charges to definite amounts cannot appeal to the courts for higher rates, even though its existing charges are insufficient to furnish a reasonable return on the fair value of its property used in the public service. For this reason, the most favorable franchises from a public utility investment viewpoint are those in which the adjustment of rates is delegated to regulating commissions or left to judicial arbitration. When there are no provisions in the franchise fixing rates and charges, the courts have held that public utility corporations are entitled to charge as much as will yield a fair return on the value of their property provided the rates are in themselves reasonable. Thus the rates charged by the Consolidated Gas Company of New York are not fixed by its franchises but by the New York Legislature. Several years ago, a law was enacted naming 80 cents per 1,000 cubic feet of

gas as the rate. It was contested on the ground that it failed to afford a reasonable return on the investment. The United States Supreme Court maintained at the time that the rate was just. But the courts also held that if the rate subsequently failed to furnish sufficient net earnings to give a fair income return on the value of the property, the company should be permitted to charge a higher rate. Accordingly, in 1920 a higher rate was temporarily granted and subsequently upheld by the highest courts. Franchise rate restrictions which are such as to hinder the attainment of revenues sufficient to offset increased operating costs arising from war or other abnormal conditions would seem to indicate an advantage in buying the securities of public utilities whose franchises place no maximum limits to the rates they may charge for their service.

No small portion of the utilities' troubles of this sort is due to the attitude of local politicians and civic reformers. It is traditionally the part of the public to play the rôle of the unfriendly critic, and only since sane commission regulations and court protection have established a sound and stable policy of rates and services, have public utility investments become secure.

6. Recapture provisions whereby the municipality may purchase or acquire a utility at or before the expiration of the franchise require attention of investors in the case of a number of existing public service enterprises. The Chicago Street Railways is an example when bondholders were not furnished sufficient protection against an impairment of their holdings by an arrangement to surrender the properties of the company to the municipality at the expiration of the franchise in 1927. Investors in Detroit and Cleveland public utilities have also experienced the adverse effect of the municipal ownership mania that has in the past spread throughout the country.

7. Unfriendly political attitude and local competitive conditions have occasionally led to the insertion of burdensome provisions in public utility franchises. An example is the pro-

vision still requiring many street car companies to pave and keep in repair the space between tracks—a relic of horse car days, when horses damaged the frail pavements of the past. Onerous division of revenues, license fees, rentals, and the like have also been inserted in many municipal franchises. Thus, the surface railway system of Chicago must contribute 55% of its net revenues to the city. Illuminating companies in some instances have been required to furnish free public lighting. Other instances could be cited if space permitted. It is these “hidden” conditions that are frequently overlooked in the selection of utility investments.

The result of many years of experience regarding franchise controversies and public utility regulation leads to the following as gradually becoming the fixed principles controlling the public attitude in these matters:

First: That public utility companies, because of the privileges granted them should be protected against undue competition in the performance of their services, in return for which the public authorities have a right to regulate their charges and practices and to inspect the nature and character of their operations.

Second: That franchise regulations, while preventing or discouraging excessive charges and earnings, should not prevent earnings from being sufficient to afford an adequate return on the capital investment or discourage the acquisition of new and additional capital from investors to perform the service adequately and efficiently.

Third: That there is no public gain through the imposition in franchises or otherwise of excessive burdens on the utility companies.

Fourth: That the conditions of the franchise should be made flexible and should be altered by proper judicial arbitration or other public authority when demanded by changed economic, political or industrial circumstances.

REFERENCES

- CLARK, H. C. *Service at Cost Plans*. New York, American Electric Railway Assn., 1920, 315p.
- COOKE, M. L., Editor. *Public Utility Regulation*. New York, Ronald Press Co., 310p.
- FLOY, HENRY. *Valuation of Public Utilities*. McGraw-Hill Publishing Co., 1912, 319p.
- LYNDON, LAMAR. *Rate-Making for Public Utilities*. New York, McGraw-Hill Book Co., 1923, 201p.
- WILCOX, D. F. *Municipal Franchises*, *op. cit.*

CHAPTER XXVIII

PUBLIC UTILITIES

EARNINGS AND VALUATION

Rates and Charges.—The subject of public utility rates is highly complicated, and no attempt at adequate discussion can be made in these pages. The interest of the investor, as pointed out in the previous chapter, lies in a proper adjustment of rates by a public authority which protects the rights of both security holders and the consumers.

The work involved in fixing reasonable rates for utilities is largely made up of determining what is the total cost of the service and what proportion thereof should be borne by the different branches of the service and by the different classes of consumers in each of these branches. In order to find these costs, it is necessary to determine (1) the actual investment of the fair value of the property and business that is employed in serving the public, (2) the reasonable operating expenses under normal conditions, and (3) the rates that will not only produce revenues to cover the operating costs but also furnish reasonable allowances for interest, profits, depreciation, and contingencies. Like all business enterprises, the aim of utilities is not to charge the highest possible rates for their services, but to obtain by means of such charges the greatest net income on the capital invested. Accordingly, it is to their advantage to reduce charges, if by such reduction they increase their output and net income. The economic basis of utility rate making, therefore, is to make charges such as will encourage the use for the service and at the same time afford a profit in performing the service. This principle applies to individual rates as well as to the general level of charges. It is

somewhat obscured by the heterogeneous character of utility consumers and the complexities in existing rate structures.

The margin of the charge within which a utility company can profitably conduct business and the public will use the service varies with each class of customer and during different periods of the day or year. It is exceedingly difficult to determine such charges even approximately without actual tests. Fluctuations in the price of commodities and in wages, changes in economic and industrial conditions and in the supply and demand for the service are continually altering the price margin beyond which the seller or the purchaser of the service, or both, may suffer an economic disadvantage.

Of recent years, in the discussion of rate questions, there have been endeavors to distinguish between charges based on *the value of the service*, and charges based on *the cost of the service*. By "value of the service" is meant what the public can afford to pay for the service, whereas the "cost of the service" is all the expenses, including interest on investment, of the utilities in performing the service. The "cost of service" theory can be practically applied only in cases where the utility performs a single, continuous, simple service. Thus, street railways and gas companies in a number of cities are operated on the "service-at-cost plan." By this is meant that their rates are adjusted at intervals so that they will furnish at all times sufficient revenues to cover all operating expenses and in addition a fair return on the property investment.

For rate making purposes "service costs" of public utilities are generally separated into two groups, *viz.*: (1) the operating expenses proper, and (2) the fixed or overhead charges. The first comprise the expenses and outlays in the direct operation of the service, such as fuel, wages, materials, etc., and the second covers the periodical outlays such as general administration, taxes, depreciation due to the elements or obsolescence, and interest and dividends on capital. The latter "costs" are constant and must be met regardless of the continuation or the

scale of operations. The former fluctuate though not proportionately in relation to the volume of service performed and the scale of the operations and are accordingly frequently termed, "variable costs." A large part of these variable costs, however, are altered very little by changes in the output of the service, and for this reason a public utility is said to be a business of "decreasing costs" and "increasing returns." By this is meant that as the number of units of output from the same plant are *increased*, the cost of performing the service "per unit" is decreased. It is for this reason that the more a capable plant not operated beyond its capacity is utilized in performing a service, the lower will be the rate charged per unit of service, when rates are to be based upon the "cost of service" plan.

As an illustration of this rule, let us assume that an electric power plant has a capacity to produce at any one time 1000 kilowatts of electrical energy per year. The actual demand of the company's services, however, is but 600 kilowatts a year. The expenses of all kinds, including taxes and interest amount to \$25,000 per year of which 60% is fixed, while 40% varies directly with the volume of the output. The fixed or unchangeable expenses therefore amount to \$15,000, or \$25 per kilowatt, whereas the variable costs amount to \$10,000, or \$16.67 per kilowatt consumed. The total cost per kilowatt accordingly would be \$41.67. Should the business of the company increase to 800 kilowatts, or 33 1/3% annually, the variable costs would increase accordingly, *i.e.*, amount to \$13,333.33, but the "fixed" costs would remain at \$15,000, making the total costs \$28,333.33 or on the basis of the increased output \$35.42 per kilowatt. Thus, the increased volume of business would on "the cost of service plan" permit a reduction in the annual rate per kilowatt of from \$41.67 to \$35.42. Of course, in the actual practice of rate making the problem is

¹ See page 316, where this subject is discussed with reference to railroad traffic.

much more complicated as there are many factors to be taken into consideration in addition to operating costs and charges.²

The cost basis of rate making is ineffective if under its operation rates are made higher than "the value of the service." By "value of the service" is what the consumer is willing to pay without reducing or curtailing his demand for the service. Thus a fare of 10 cents by an urban street railway may be adjudged necessary to meet the "cost of service" plan, but if a large part of the public are willing to dispense with car rides because 10 cents a ride is considered too high or uneconomical the company, instead of obtaining the desired increased earnings, will find its revenues reduced. It is only within the margin between the "cost of the service" and the "value of the services" charges, that the general level of public utility rates can be economically and satisfactorily adjusted.³

During the years immediately following the war the rates and charges for electricity, gas, street railway service, etc., were rather generally readjusted to the higher costs, and thus the earning power and popularity of public utility securities were restored. In street railways the restoration has never been complete, but in the case of typical gas and electric companies it has been more than complete, since many of these have retained higher charges for services while at the same time reducing their output costs by more economical and efficient operating methods and by improved plant equipment.

Analysis of Earnings.—A much overrated investment feature of public utilities is the relative stability of their earnings. Since most utility companies furnish necessary services, the need for which is not affected by fluctuating business conditions, their revenues are not greatly disturbed by a transition from good to bad times. In this connection, it should be remembered, however, that the stability applies only to gross

² An important factor, known as the "load factor" is discussed below.

³ The adjustment of individual rates among different classes of consumers and different branches of the public utility services is another problem which is too complicated to be covered in these pages.

revenues and not to net income, or the amount left after operating expenses are paid. Operating costs in recent years have greatly increased among public service companies as well as among other business concerns. In cases where the charges for services could not be increased in proportion to the growth in operating expenses, heavy losses of net income have resulted. The situation of the Interborough Rapid Transit Company of New York illustrates this point. The company's gross earnings have been steadily increasing, but the operating costs have increased faster and have reduced the net revenue below the company's interest charges. It is the net earnings and not the gross revenues which determine the safety of income on investment securities.

Then, again, as an offset to this relative stability of earnings, public utility companies as a rule do not share in general business prosperity as much as other companies. When business is very good, manufacturing companies and railroads earn more. But the income of a gas company or a street car railway is not affected by the better times. Moreover, manufacturing companies can curtail their output to keep up prices when the market is unfavorable. Public utilities cannot do this since they must sell their service continuously, even if at a loss. Moreover, they are restricted to their locality, and cannot sell their service where they can get the highest price.

Capital Requirements.—Most public utilities require a large amount of fixed capital. The original plant instalment involves a much greater outlay relatively than in most other concerns, particularly when modern equipment is being used. Moreover, capital cannot be easily provided from current earnings, as in a manufacturing company. To meet the public demand for service, it must generally be secured at once, as it is impossible to wait until earnings have increased. Much of the capital investment in public utilities in recent years has been in vast hydro-electric plants. These require a tremendous capital

outlay before operations begin and considerable time must elapse before earnings commensurate with the amount of the investment can be expected.

The Load Factor.—Another reason why large capital investment is necessary in public utilities is that public service companies must have a plant and equipment to meet the largest demand that may be made for service *at any particular time*. This point of maximum demand is called "the peak of the load." A utility corporation, such as a gas company, is given a franchise to furnish adequately a public service, which is not demanded continuously in equal volume or intensity. During certain periods of the day and the night little gas is used by domestic consumers, whereas at other hours almost all will be demanding gas service. The proportions of the demand vary with some public utility companies not alone at different hours of the day but in different seasons of the year. Thus, an electric power plant constructed largely to serve irrigation works, operates at or near full capacity only four months of the year, the remaining months requiring use only for domestic lighting and power purposes. Figure 10 illustrates the average variation for the larger cities of the country in the number of telephone calls made from business offices in the course of a day. At midnight its use is almost nil. It rises steadily until 10.30 A. M., when it reaches its maximum point, and then declines towards the evening. The telephone company's equipment must be adequate to meet the "peak." Hence the necessity of a relatively large investment in fixed capital. The earnings of the whole service must be sufficient to pay the interest on the whole investment including the part used only a portion of the time.

In growing communities public utilities have to meet not only the actual, but the probable maximum demand. They must, therefore, provide additional plant instalments in advance of actual use. Telephone companies of the Bell System

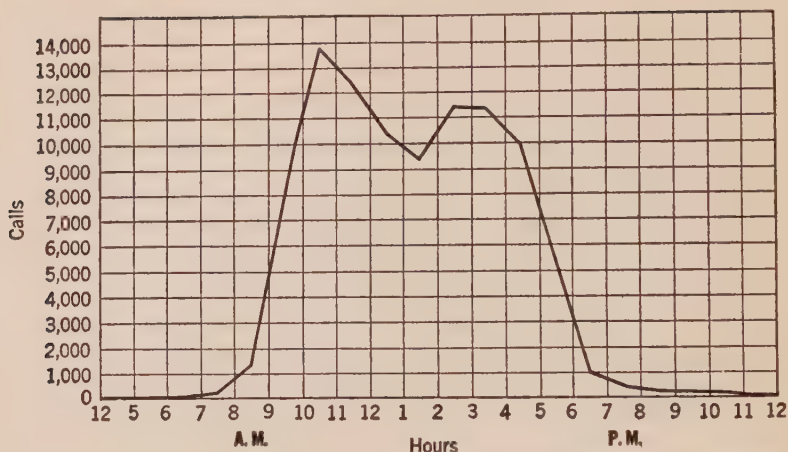


Figure 10. Graphic Chart Showing Fluctuations in Number of Telephone Calls during 24 Hours

located in large cities find it good business policy to forecast the requirements for their service twenty years in advance, and new capital is applied in construction of mains and central stations several years before a return on the investment can be even expected. Gas companies also frequently lay mains in suburban sections where there is very slight demand for its service, either to meet the conditions of the franchise or to keep out potential competition. A fertile cause of mortality among street railway companies, as pointed out on page 358, has been an excessive expansion into outlying districts. As long as their services are restricted to densely populated sections of a city their earnings may justify the capital investment, but when they reach out into regions producing little traffic, they are apt to increase capital indebtedness more rapidly than earnings.

Upkeep.—Another matter for study in connection with operating expenses is the necessity for proper depreciation provisions. Maintenance must be kept up if the company is to perform efficient service, and depreciation or obsolescence

must be allowed for if it is to have sustained value and earning power. Public utility companies, particularly when subject to competition, have to take advantage of the mechanical and technical improvements even though their instalment incurs heavy losses in scrapping the old equipment. Therefore, in studying public utility companies an investor should look carefully into the provision made for depreciation losses. With a railroad, guarding against depreciation losses is not so important. A railroad's investment is scattered largely among relatively small units of physical equipment which are readily replaced from current earnings. Public utility investment, on the other hand, is chiefly localized in expensive plants, so that a single replacement frequently requires a relatively heavy outlay of new capital.

Units of Output and Cost.—A great deal of attention is given by engineers, bankers and investors to analysis of units of output and costs in public utility operations. Thus, costs are usually stated in terms of kilowatt hours generated in the case of electric companies, thousand feet of gas produced for gas companies, passengers or revenue car-miles for electric railways, gallons of water distributed for water works, and telephone calls or telephone stations for telephone companies. These units correspond to those pointed out in the discussion of railroad traffic statistics. They are applied to the measurement of revenues, expenditures and capital outlay as well as to the measurement of efficiency and economy of operation. The limitations on the proper use of these data for comparative purposes have already been discussed. As conditions of operations vary greatly among utilities, the employment of statistical units for measuring costs, efficiency or profitability of an enterprise requires the utmost caution. It is a matter to be handled properly only by trained engineers and investment analysts.

Public Utility Valuation.—Because of the legal theory that public service corporations should be permitted to charge rates which under normal conditions will give a reasonable return on the fair value of their properties, valuation has become almost an essential factor in the investment analysis of these enterprises. An investor should not feel secure in his commitment, however, when he has merely an absolute mortgage on a costly public utility plant. The property, in addition to having a reproduction cost or physical value in excess of the indebtedness against it, requires patronage, economical methods of operation, and a possibility of earning its fixed charges under normal conditions.

Conscientious promoters and financiers may assure themselves of the public need for the proposed enterprise; of its resources and of its future, and may even test in every detail the cost estimates as to plant, equipment, expenses and other essentials; yet they cannot with all these precautions assume that the capital outlay will bring in a reasonable return. Further precautions are necessary. At the basis of all sound business enterprises lies the fundamental maxim, *that the construction is to be done at as small cost as is consistent with the rate of return expected from the probable volume of business*. If the cost is excessive the enterprise will not pay for the capital investment. If it is built inadequately for the service, the enterprise will likewise prove unsuccessful. Such was the experience of many hastily built interurban traction lines. These, after a series of receiverships and reorganizations, in many instances, had to be substantially rebuilt to meet traffic requirements.

The emphasis placed on valuation as a factor of safety of public utility securities would thus seem to be exaggerated. It is generally considered essential to security that a public utility bond issue should have a lien on physical property valued at considerably in excess of the outstanding amount of the bonds. Mere value of physical property is, however, but one

element contributing to financial soundness. Actual profits over long periods of time must also be given due consideration. If losses during certain years are fully offset by surpluses during other years and if there is prospect of continuous increase in earning capacity because of population growth, enlarged demand for the services, more economical operations, or any other reasons, the investor may overlook the valuation factor in his analysis.

It is becoming the general policy of engineers, appraisers and state public utility commissions which are concerned with valuations, to make allowance for "going value" in estimating the reproduction cost of public utility properties. Probably the best explanation of the concept of "going value" is contained in an opinion of the New York Court of Appeals in *Public Service Commission v. Kings County Lighting Company*:

It takes time to put a new enterprise of any magnitude on its feet after the construction work has been finished. . . . The company starts out with the "bare bones" of the plant, to borrow Justice Lurton's phrase in the Omaha Water Works case. By the expenditure of time, labor and money, it co-ordinates those bones into an efficient working organism and acquires a paying business. The proper and reasonable cost of doing that, whether included in operating expenses or not, is as much a part of the investment of the company as the cost of the physical property.

In the foregoing opinion, it is readily apparent that "going value" is closely akin to what is frequently termed "development costs." Expenditures representing "going value" comprise not only the initial outlays for establishing a sound business on a paying basis, but also certain losses arising from property abandonments and changes in physical structure required to perform properly the public utilities service.⁴

Other Investment Factors.—There are additional investment advantages attaching to public service securities. Many

⁴ For additional remarks on valuation, see Chapter XXIII, page 306.

years of invention and progressive development in processes and in mechanical equipment for furnishing utilities have effected greater stability in methods and appliances. Depreciation and displacement are not as potent dangers to permanency of investment value as formerly. The experimental stage in many cases has been passed and the financial losses occasioned by untried processes or uncertainty of demand for the services furnished are no longer such as to deter investors from purchasing public utility securities. Because of the enlargement of the field of their operations the companies have larger credit facilities, affording them a broader market for their securities, which places the securities on the same plane with the issues of railroads and the giant industrials. With these fundamental advantages public utility bonds offer a large and profitable field for investment. The yields on them are now larger than on municipal and railroad issues. They are even higher than on some industrial securities of the same grade.

Market of Public Utility Securities.—Public utility securities entered the general investment field later than the railroads, though in a few cases existing public utilities, in their origin, antedate the oldest railroad companies. Until the last thirty to forty years, however, little was known of the financial standing of individual utility companies outside of the localities where each operated, and only in exceptional instances where the amount of existing securities was large enough to be listed and dealt in on the leading exchanges. The market for the securities was thus restricted. Moreover, the physical equipment and the mechanical processes connected with the operations of these companies were not standardized. Consequently, the degree of business risk was greater than in railroads. These factors for a long time placed the public utility securities below the railroads in the scale of investments. Changes in recent years have considerably altered this condi-

tion. The creation of immense public utility and industrial corporations has permitted them to issue large blocks of securities at relatively high income yields that find a place in the general investment market in competition with standard railroad securities.

The offering of new public utility securities during the last decade as pointed out above has been outstripping those of the railroad companies. A relatively small part of this large value of public utility obligations have been listed on leading security exchanges. Like state and municipal obligations they are mainly dealt in "over the counter," *i.e.*, through dealers. A number of well-known investment banking houses specialize in this class of obligations, and through their continuous "bids" and "offers" active markets are created and maintained, thus affording the advantages of listed securities.

Institutional Holdings of Public Utilities.—Public utility securities as yet are not as popular as investments of banks, trust companies, insurance companies and other financial institutions as those of railroads. Savings banks in several leading states are severely restricted or prohibited altogether in placing their funds in this group of securities. The banking laws of New York State do not permit savings banks or trustees to purchase any public utility bonds whatsoever, whereas Massachusetts and Connecticut limit such commitments to the obligations of local companies. According to the Comptroller of the Currency, mutual savings banks in the United States on June 30, 1924, held \$214,072,000 in value of bonds of public service corporations, including street and inter-urban railways' compared with \$1,008,853,000 of railroad bonds and \$611,602,000 of state, county and municipal bonds. Commercial banks on the other hand, both national and state owned at the same date \$675,607,000 of public utility bonds and loan and trust companies held \$173,809,000. Insurance companies, also, have been gradually taking on more of public

service company securities. Information, however, is lacking of the full extent of this class of insurance company investments. It is estimated that during the four years, 1921 to 1923 inclusive, the life insurance companies alone increased their holding of public utility corporations securities by about \$200,000,000.⁵

The Metropolitan Life Insurance Company, the largest concern of its kind in America, has been an investor in the securities of public utilities for a number of years, probably to a greater extent than any other life insurance company and with very satisfactory experience. At the end of 1923, approximately 15% of its total investments consisted of public utility bonds. As pointed out by Henry W. George, the treasurer:

We are convinced that under fair regulation on the one hand and conservative management on the other, the securities of these companies furnish an advantageous outlet for the investment of life insurance funds. The power and light industry is one of the greatest in the country, the amount invested in the various properties being estimated at over \$6,600,000,000 and the investment is constantly increasing as the uses of electricity are being multiplied. "Electricity speeding to the aid of man, is the outstanding feature of the present age." The company's investment in this class of security is spread over 33 states and Canada, and includes 140 properties.⁶

REFERENCES

- DEWING, ARTHUR. *Financial Policy of Corporations*, *op. cit.*
IGNATIUS, M. B. *Financing of Public Service Corporations*, *op. cit.*
MAY, I. A. *Street Railway Accounting*. New York, Ronald Press Co., 1922, 454p.

⁵ See *Life Insurance Funds, the Life Blood of Economic Development*, by Archibald A. Welch, page 6.

⁶ *What \$1,500,000,000 Asscts Means*, by Henry W. George, Treasurer, Metropolitan Life Insurance Company, page 8.

CHAPTER XXIX

INDUSTRIAL SECURITIES

GENERAL CONSIDERATIONS ¹

Investment Standing.—Industrial securities are the most recent class of long-term public investments. They have occupied the lowest rank among investments. The growth in the scale of production and in the size of industrial plants, and the combination into one organization of separate concerns brought industrial securities into prominence and has given them an important place on all security exchanges. The large element of *business risk*, especially at a time when the changes in the scale of production and the enlargement of markets were causing displacement of mechanical processes and heavy expenses of distribution, formerly made industrial securities unattractive as investments. Consequently these sold at high income yields. The “experimental stage” in many instances, having been passed, the market for industrial securities has much improved and their income yield tends to conform to that of other classes of investments.

Lack of Standardization.—Unlike railroad and public utility companies, industrial corporations do not readily lend themselves to comparative or statistical analysis for investment purposes. The activities and operating results of this group of business organizations cannot be gauged so easily by the use of standard units, as for instance, the ton-mile in the case of railroads, or the kilowatt-hour in the case of electric concerns. This is due to the lack of uniformity in the industrial

¹ The broad tests of railroad and public utility investments as outlined in the previous chapters apply in many cases to industrial securities, and for this reason are not again taken up in the present chapter.

and financial structure as well as the accounting methods of manufacturing concerns. Railroad activities have become thoroughly standardized, and comparative statistics for contrasting the operations and financial status of one railroad with those of another are widely used, particularly in analyzing the values of its securities. The same method can be applied in a considerable degree to public utilities which perform services similar to those performed by railroads.

It is exceedingly difficult, however, to use standard units or indices in a comparative study of industrial corporations. The United States Steel Corporation, for example, has its peculiar operating and accounting methods and its own system of financial and industrial organization, which is probably not followed by other steel concerns. The Republic Iron and Steel Company engages in a similar line of business, but its methods of operation are quite different, being adjusted to the size and character of its plants and the amount of its output. In general, industrial and commercial concerns do not follow uniform rules and methods of accounting such as are imposed by the Interstate Commerce Commission on railroads, and by state public service commissions on public utility companies.

Unrestricted Field of Operation.—Another distinction possessed by industrial companies from an investment standpoint is that they are constantly varying and extending their commercial and financial activities. A railroad generally does only a transportation business; a gas company is limited to supplying gas to consumers, and an electric company to furnishing and distributing electric current. An industrial company, however, while it may be organized to manufacture, say, railroad cars, is free to turn its operations to other lines, such as the construction of military equipment and munitions, the making of automobile trucks, and the like. Again, a company organized to sell cigars can easily extend its operations to

the confectionery business. There is little legal or economic restriction on the activities of ordinary commercial undertakings. They can expand, restrict, curtail and diversify their production practically as they will.

The capacity for expansion and diversification of activities means large possibilities of income growth when circumstances are favorable. An industrial company is not physically limited in the selection of the market for its products. It can extend its markets almost anywhere, whereas railroads and public utilities are generally limited in marketing their services to the territories where they are located. A large industrial corporation may have the whole world for its market. Its expansion possibilities are limited only by competition and availability of capital.

Development of Industrial Consolidations.—The active consolidation of large industrial concerns whose securities have been offered as investments in the United States began in the last decade of the nineteenth century. Though several large consolidations may be ascribed primarily to the desire of promoters to foist securities of doubtful value upon the public, a considerable number were due to the growing confidence in American industrial progress and to the desire to reap the advantages of large scale production. In view of the sporadic circumstances under which the large industrial combinations were formed, they naturally had many defects which were reflected in the early investment standing of their securities. These defects may be briefly summarized as follows:

1. Overcapitalization.
2. Insufficient working capital.
3. Insufficient integration.
4. Inexperience, combined with inadequate information regarding the condition pertaining to their respective industries.

Each of these shortcomings will be considered in turn.

HEAVY CAPITALIZATION.—Overcapitalization was undoubtedly the most pronounced defect in the organization of the large industrials. The consolidations, however, made it necessary. The former owners of the plants taken over generally demanded, in addition to cash, prior lien securities of the consolidated companies as part of the purchase price. This led to the creation of large issues of bonds and cumulative preferred stock carrying high dividend rates. In most cases the outstanding preferred stock of the new consolidations was equal to, or in excess of, the value of the plants acquired. The promoters, in order to recoup themselves for their cash outlay and their labors in bringing about the consolidations, endeavored to obtain from the public the highest possible price for the new common issues. Accordingly, unwarranted dividend payments on the common stock were made to improve the market for such securities. In several cases, the defect lay not so much in the amount of the capitalization as in the capital structure itself. Optimistic estimates of future earnings led to initial bonded indebtedness carrying heavy fixed charges. Although in years of business prosperity net earnings covered these charges, a period of depression or the appearance of new and unforeseen competition in several instances caused net income to fall below the amount required to meet interest and sinking fund payment, with consequent insolvency and receivership.²

LACK OF WORKING CAPITAL.—The inadequacy of working capital seriously hampered the progress of the first large industrial "trusts." In acquiring control of their respective industries, a number of the consolidations took over obsolete and dilapidated plants. Modernization and extension of these plants became necessary, and funds for this purpose had to

² Examples of receivership caused by early heavy fixed charges are the National Starch Manufacturing Company, the National Cordage Company, the American Bicycle Company and the United States Shipbuilding Company. For an account of the finances of these together with other industrial combinations which have had to undergo reorganization, see Dewing, *Corporate Promotions and Reorganizations*, published by the Harvard University Press.

be obtained from accumulated profits. Several of the industrial concerns endeavored to increase the profits by increasing prices, but this policy merely resulted in renewed competition and widespread popular disfavor. The policy of paying out in dividends an excessive amount of current earnings further impaired working capital. This not only prevented the concerns from expanding their operations, but weakened their power of withstanding business depression.

LACK OF INTEGRATION.—In some cases the new combinations lacked integration or unification of the several activities which comprised the particular line of industry in which they were engaged. Integral processes are understood to refer to the various stages of manufacture and distribution which directly follow each other as the raw material is converted into the finished product and placed at the disposal of the consumer. Combining these activities in one organization results in commercial independence and is particularly important in preventing financial disasters due to violent fluctuations in raw material prices or changes in marketing or competitive conditions. Examples of concerns which have been successful in this direction are the United States Steel Corporation, the Standard Oil Company of New Jersey, the United States Rubber Company, the International Harvester Company, and the Bethlehem Steel Corporation.

INEXPERIENCE.—Industrial corporations suffered severely because of their inadequate knowledge of conditions in their respective industries, and their inability to gauge properly the demand for their products or to reduce operating expenses in times of business depression. Railroads after a number of years of disastrous experience have succeeded in accomplishing these ends. The industrial companies have of late been following their example. This was manifest as early as the business depression of 1907, when, in spite of the serious financial stringency and the sharp declines in the consumption

of their products, there were relatively few receiverships among large industrial concerns.

Because of the defects of organization, the new industrial consolidations naturally encountered considerable difficulty in marketing their securities. The experimental character of a number of the undertakings discouraged investors from entering this industrial field of investment. Owing to the popular distrust and the fear of hostile legislation against combinations, the shares of industrial corporations did not have the market value to which their earning capacity seemed to entitle them. Moreover, the formation of a large number of consolidations within a brief period of time caused an "undigested" supply of securities and unfavorable market conditions.

Later Policies.—Having benefited by their early experience, industrial corporations have in recent years scored notable progress in their finances by practicing the following policies:

1. Conservative distribution of dividends, *i.e.*, the withholding of dividend payments until a time when the financial standing and physical condition of the property permitted the distribution of profits to shareholders.
2. The building up of cash reserves out of profits so as to insure adequate working capital, the gradual betterment of the physical value and earning capacity of their plants, and the elimination of the overcapitalization evil.
3. Better knowledge of their respective industries, both as to the character of the demand for their products, and of their relations to distributors, consumers and employees.
4. The maintenance of earning stability by diversification of activities and enlargement of markets. Export business has been developed and in some cases foreign plants have been constructed, while as a general rule the aim has been to broaden the markets for their goods. The control of raw materials, such as ore, lime, timber,

coal, etc., has rendered the large manufacturing concerns independent of temporary price fluctuations from which they had suffered in the early period of industrial combinations.

The period of most excessive capitalization and unstable earnings has passed. Bankers and investors are insisting upon more and more information concerning the plans of organization, the actual value of the tangible assets, the proved earning capacity, and similar data relating to industrial concerns before undertaking the purchase and distribution of their securities.

Improvement of Financial Condition.—The financial position of the industrial combinations which have benefited from their hard experience in the immature stages of their existence may be described under two heads:

1. The physical betterment of plants, the enlargement of working capital, and the general improvement in their financial condition combined with an understanding of their markets, now assures them stability of earnings sufficient to resist the effects of later business depressions.
2. Their securities have been gradually advancing from the speculative to the investment class. Their popularity is increasing and they are purchased by the most conservative of investors.

Study of Industry.—Successful investment in industrial securities requires continual investigation and study along two lines: (1) the character of the management and the financial conditions of the individual companies whose securities are available for investment, and (2) the general status of the separate industries represented by these companies.

If an investor owns bonds of the American Sugar Refining Company or the Anaconda Copper Company, it is equally as important that he should have some knowledge of the situation in the sugar and copper industries as to know the financial

statements, the capital structure and efficiency of the management of these companies. If, as when these lines are written, there is statistical proof that there is a relative oversupply of raw sugar, it is evident that a sugar refining company with large supplies of this material on hand is likely to experience heavy losses in its operation. Similarly, a copper producing company with a large annual output, and subjected to heavy administrative costs, interest payments or other fixed charges, has poor prospect of maintaining its net income at a time of depressed industrial conditions or a disturbance of international trade and finance, because of economic distress in copper importing countries.

The correct analysis and interpretation of trade and industrial conditions is an exceedingly delicate and difficult task. It is in this field that experts rarely agree. Differences in judgments and opinions are one of the principal reasons why some investors are willing to buy when others are eager to sell at prevailing prices. The financial newspapers and trade journals are the most important and most readily available sources of information on industries. The ordinary daily newspapers frequently publish inaccuracies and errors which it is impossible to eliminate because of the speed at which the newspaper press is accustomed to get its news. But the great mass of the news published in reliable trade journals on business and finance is authentic and largely accurate. The investor is warned against expressions of opinion by recognized leaders in the various industries, or by "service bureaus" and others whose special interests impel them to color the facts. Trade reports prepared by the commercial credit companies (such as "Bradstreet" and "Dun") and by trade journals such as the *Iron Age*, *Willet and Gray's Weekly*, the *Engineering and Mining Journal* and the *Textile World*, together with the carefully prepared statements on conditions issued by the Federal Reserve Board, the federal reserve banks, the Department of Commerce and other gov-

ernmental or official bodies, are, on the whole, reliable and trustworthy.³

The proper interpretation of trade information calls for an elementary understanding of the conditions surrounding an industry. Bare facts or figures mean nothing unless considered with respect to these conditions. Thus, it is quite possible for the consumption of a commodity to show large and continuous growth while, at the same time, the producers of the commodity as a whole will be undergoing financial strain merely because productive capacity outstrips consumption. This has been at various times the condition of the coal, copper, oil, and fertilizer industries. It has intermittently handicapped the automobile trade and in the leading basic industry, *viz.*, steel manufacture, it has caused the series of business cycles which have been studied in recent years so assiduously by economists and business statisticians.

Effects of Competition.—Prevailing or potential competition is one of the powerful industrial influences which deserve careful consideration in industrial investments. The competition may be direct or indirect. By direct competition is meant the rivalry for business by concerns in the same industry producing like commodities or services. Indirect competition arises from conditions whereby goods produced by one concern or by one industry can be replaced or substituted in consumption by goods or commodities of another kind. Thus, concrete may take the place of steel, fuel oil or natural gas may replace coal, bituminous coal may be substituted for anthracite, and rubber may be used in place of leather. Many other similar cases might be cited, and even when the actual displacement is meagre, its possibility may restrain or retard price advances which make the industry profitable.

³ See Appendix A, "Sources of Investment Information," for a further discussion of this topic.

Raw Materials.—The sources and the control of raw materials used in the different industries are also matters of concern in studying the relative investment merits of industries. On a preceding page, it was pointed out that one of the defects of the early industrial combinations was insufficient control or inadequate supplies of raw materials. The depressed condition of the leather industry following the European War offers a good illustration of the importance of this fact. The principal raw material used in this industry are hides—a by-product of the packing industry. The raw material supply, therefore, is not adjusted to the demand for finished leather, but is dependent upon meat production. A change in the quantity of meat, therefore, affects the price of the raw material without substantially influencing the demand for leather goods, so that a rise in hide prices cannot readily be shifted to consumers. For this reason, companies engaged in preparing leather from hides, such as the Central Leather Company and the American Hide & Leather Company, are apt to experience fluctuating earnings. The textile companies are under a similar handicap due to changes in the market prices of cotton and wool. It is this class of companies, as shall be shown later, which for financial safety, should avoid heavy indebtedness or otherwise burdening themselves with fixed charges. Tobacco manufacturing companies, on the other hand, because of a smaller degree of dependence on the immediate yield of a single crop of leaf tobacco, have experienced greater stability of earnings and can more safely carry a bonded indebtedness.⁴

Character of Demand.—The stability of demand for the products of an industrial company is a favorable investment factor. The production of the necessities of life, such as meat, bread, and other foodstuffs, textiles, wearing apparel and other commodities in daily use would undoubtedly be the

⁴It takes from three to five years for tobacco to ripen before it is used in manufacture.

most favored class of investments were it not for the fact that in many cases competitive and other influences disturb stability of profits. The production of specialized goods dependent on the whims of public taste, such for example, as the almost obsolete bicycle, phonographs, radio machines and the like, may prove for a time profitable undertakings, but, on the whole, they are not to be considered as in the field of secure long term investment risks.

Obviously, all these matters cannot be passed upon adequately by the ordinary investor. The responsibility for a proper study of industries and general conditions affecting industries lies with promoters, investment bankers, financiers and the reliable and unprejudiced information services. The specialized profession of investment counsel is yet too young to fully meet the problems.

REFERENCES

- COLLVER, CLINTON. *How to Analyze Industrial Securities*. New York, Moody's Investment Service, 1917, 204p.
- DEWING, A. S. *Corporate Promotions and Reorganizations*. Cambridge, Mass., Harvard University Press, 1914, 615p. (Gives a detailed history of several large corporate promotions and reorganizations.)
- KEIR, MALCOLM. *Manufacturing Industries in America*. New York, Ronald Press Co., 1920, 324p.
- LOUGH, W. H. *Business Finance*. New York, Ronald Press Co., 1917, 631p.

CHAPTER XXX

INDUSTRIAL SECURITIES

TESTS OF VALUES

Study of Individual Companies—Management.—In no class of investment does management count so much as with industrials. This is because (1) industrial company operations are not as highly standardized as railroad and public utility operations, (2) competition is more prevalent and effective, and, (3) frequent changes in business conditions influence directly and immediately costs and profits. It is for this reason that managers and directors of industrials must be constantly alert, must use sound judgment in forecasting business conditions, keep a control on expenses and finances, and always be prepared to meet present and potential competition. The business character of the directors is thus important in estimating the investment merits of industrial companies. They, as individuals, should have business experience and sound judgment, and, above everything else, should select the officers of a company on the basis of their managerial skill and knowledge of the industry, rather than because of their control of a voting majority of shares or their relationship with banking interests. In all large enterprises there is a varying degree of diffusion of responsibility and an impossibility of direct personal control and supervision, which handicap effective management as compared with the small concern. In the formation of many of the large industrial corporations, men whose business skill had been confined to the management of a small factory were given the control of a group of plants widely separated and operating under local conditions. These men, when com-

pelled under the new form of organization to delegate the actual management to paid superintendents, over whom only indirect authority could be exercised, frequently failed in the new task for which they had neither training nor experience.¹

Another handicap experienced in the transfer of management to paid superintendents of the separate plants taken over in industrial consolidations from former individual owners has been the tendency of the latter to degenerate into automatic parts of a great machine. Under such circumstances, they frequently lacked initiative or the power of assuming responsibility. This naturally leads to carelessness, waste, disloyalty and inability of adjustment of operating conditions to meet new competitive situations. Many illustrations of financial failures due primarily to this cause could be given as, for example, the Rumley Company in 1913, the International Steam Pump Company in 1914 and the American Writing Paper Company in 1922, as well as other industrials which had to be reorganized under entirely new management.²

Banking Support.—In addition to efficient management, it is as essential to an industrial corporation as with a railroad to have strong financial backing to assure its future. Large banking concerns, however, appear to be less willing constantly to stand behind industrial concerns than railroads, and as industrials usually require larger working capital and greater lines of credit, they are subject to a greater risk of insolvency due to lack of banking support. There have been many instances in recent years, particularly during the business depression of 1920-1, of the tiding over of industrial companies by the extension of bank credits.

Analysis of Earnings.—As pointed out above, lack of standardization prevents proper comparison of the income ac-

¹ See Dewing, *Corporate Promotions and Reorganizations*, pages 558-9.

² For an excellent discussion of the influence of poor management in the failure of industrial companies see Dewing, *Corporate Promotions and Reorganizations*, pages 557-566.

counts of industrial companies so that it is difficult to judge of the investment merits of a company's securities by comparing its activities and operating results with the activities and operating results of another company. The investor in his analysis of a company's progress is thus limited largely to a study of its financial statements covering a period of years. In making such analysis, he should be careful to note any changes in accounting methods during the period he is investigating. An industrial company may alter the form of its balance sheet or income account whenever it desires. Thus, a company in order to avoid payment of income taxes might augment its expenses by increasing reserves for depreciation and for contingencies, such as flood and fire. Industrial companies are in the same position as an income taxpayer, who has much leeway for the use of individual judgment.

However, due largely to the rise of the profession of accountancy in the United States and also to the fact that all large business concerns are now practically forced to use the services of professional licensed accountants to certify to the correctness of their accounts, there is a progressive trend toward correct and uniform accounting methods. In Great Britain, the chartered accountant is a legally responsible profession, and if a licensed firm of accountants certifies to the correctness of a fraudulent or misleading balance sheet or income statement of a corporation, persons who invested in the securities on the strength of these statements can sue to recover losses. A similar responsibility is gradually developing in the United States.

In inspecting reports of industrial corporations, it is always well to ascertain if the firm of accountants certifying to the financial statements is reliable. Very often this certification reads: "We certify that the accounts are correct in accordance with the books." The phrase, "in accordance with the books," relieves the certified accountant of responsibility and should be a warning signal to the cautious investor. The

clear and correct statement of the sources and the income and expense items and the verification of inventories and of depreciation reserves in relation to physical condition of property is essential to proper certification of accounts.

Income Statement of Industrial Company.—Methods of interpreting the financial statements of industrial corporations have already been covered in a general way in previous pages. Here, merely the special features relating to the accounts of industrial concerns need be discussed. As stated on page 266, many industrial companies do not publish their gross income, or sales, as it is their policy to withhold this information from competitors or the public. The following simplified *pro forma* income statement which contains this item is given here merely for purposes of illustration.

THE A. B. C. CORPORATION

Gross Sales or Revenues.....		\$1,000,000.00
Deduct :		
Operating Costs.....	\$600,000.00	
Depreciation	50,000.00	
Taxes	50,000.00	
Other Reserves to offset losses	50,000.00	750,000.00
Net Income Available for Bond Interest.....		\$ 250,000.00
Operating Ratio		75%
Deduct: Interest on \$2,000,000 of Bonds at 5%.....		100,000.00
Margin above Interest.....		\$ 150,000.00

The statement shows deductions from the sales for operating costs, depreciation, taxes, and reserves to offset certain contingencies arising directly out of operation. These items total \$750,000, or 75% of the sales. This 75% is the operating ratio for the year. The fluctuations of the ratio from year to year is an index of the increasing or decreasing efficiency of operations. Depreciation is a matter for the officials of the corporation to determine, and the accountants

to verify, and it is well to see that it is separated from direct operating costs.

Some corporations try to follow a uniform practice in allowing for depreciation, while others do not.³ It is also well to examine whether maintenance is kept up, inasmuch as a poorly maintained and equipped plant eventually results in lower efficiency, smaller output, and impaired earnings. What is left after deducting the expenses, operating costs, depreciation, taxes, and reserves, is the net income which, in our example, is equal to \$250,000, or 25% of the sales. This is ordinarily the amount available for bond interest and is the item in the statement in which the bondholder is interested most.

The corporation has an issue of \$2,000,000 bonds, the interest on which is \$100,000 annually. The deduction of this charge from net income leaves a margin of \$150,000. If that or a larger margin appears in the income statement for a number of years in succession the bondholder may feel reasonably confident that his interest will be paid to maturity. Industrial companies that provide sinking funds in order to meet the maturity of their obligations are not required by any observance of accounting principles to charge this item against net earnings unless such sinking funds represent the using up, extinction, or depletion of fixed assets.

After the bond interest is paid, the company may pay out the balance of the earnings in dividends on its preferred and common stock. It may pay out the full amount or even more to its stockholders, or it may reserve all or part for the acquisition of additional properties and materials. It is always to the advantage of the bondholders for the company to put back a large part of the surplus earnings into the property, whether such earnings are applied to the increase of the fixed

³ The New York Stock Exchange in recent years has required companies which apply for the "listing" privilege for any of their securities to make a statement of their depreciation methods and policies.

assets or current assets. In either case, the bondholder's so-called "equity" is proportionately increased.

Consolidated Statements.—The foregoing analysis of an industrial income statement applies only to the statements issued by industrial organizations of the simplest form. The great bulk of the corporations whose securities are sold to the public as investments have a complex organization, and with few exceptions come within the class known as "holding companies." Most of these companies simplify their financial statements by publishing consolidated accounts which combine the financial results of both the holding and the subsidiary companies.⁴

In analyzing a corporation's financial statement, care should be taken to see whether it is a consolidated statement or one of a single unified corporation. The holding company pure and simple, as already pointed out, does not own physical assets directly, but only the stock of its subsidiary companies. The United States Steel Corporation, as an exclusively holding company, is one of the many concerns which publish a consolidated statement that combines the figures of the numerous controlled companies. This is the best method for holding companies to follow. Some holding companies, however, publish statements based on their own books of accounts. The investor, however, desires to know what are the real profits and losses resulting from operations of controlled companies, and these can be concealed or excluded entirely from the statements of the holding companies. By ownership of the voting control of capital stock of the subsidiary companies, the holding company can determine the amount of dividends it may receive from the subsidiary companies, whether such dividends have been actually earned or not. Thus a statement of a holding company can be drawn up very much as the directors wish.

The need for consolidated accounts practically arose with

⁴ See illustration on page 394.

the growth of the large industrial combinations, or so-called "trusts." There were, of course, prior to that time many corporations which had acquired subsidiary companies but they operated them as separate corporations. Probably the first important statement of consolidated accounts to be published was that of the United States Steel Corporation in 1902. On the other hand, the American Tobacco Company, which was organized several years before the Steel Corporation, did not combine the accounts of subsidiaries. The American Tobacco Company, therefore, could and did for a number of years conceal the true earning capacity of its subsidiaries from the security holders.

Nature of Statement.—The accounts of a holding company should be prepared and published in such form as will exhibit to the security-holders the true financial position of all the companies affiliated with the concern. It has long been recognized by accountants that this can only be accomplished by consolidation of accounts, particularly when the affiliated companies are engaged in the same or closely related businesses. Accordingly, the Revenue Act of 1918 requires that "corporations which are affiliated . . . shall, under regulations prescribed by the Internal Revenue Commissioner . . . make a consolidated return of net income and invested capital."⁵

The principal point for consideration to the investor in regard to consolidated accounts is: How shall the consolidated financial statements be prepared and published. The object of such a statement as shown in Figure 11 is to indicate the true financial position of a company and its subsidiary companies in relation to the outside public. Consequently all inter-company holdings of stock and balances of every kind should be eliminated in the published statements.

⁵ The income tax regulations provided that the owning or controlling of 95% or more of the outstanding voting capital stock shall be deemed to constitute an affiliation, but that consolidated returns may be required, even though the stock ownership is less. The regulations call for a disclosure of affiliations where the stock ownership is in excess of 50%.

Where a corporation does not own the whole of the capital stock of a subsidiary company, and it consolidates the latter's accounts with other subsidiary companies, the proportion of the accounts of the particular subsidiary it eliminates is the percentage which the par value of the stock not in its possession bears to the total capital stock. Only the proportion of the earnings of the subsidiary company represented by the stock it holds is taken into the income account of the parent company. This method, however, is not universally followed.

Analysis of the Balance Sheet.—In constructing an industrial company balance sheet, the items should be so classified that security holders are able to know the amount of actual tangible property as distinguished from the amount of what in accounting is known as "good-will," but which is commonly called "water." Much has been said and written about watered stock, or excessive capitalization, but relatively few persons know just what it means. Technically, it represents merely the amount of securities issued in excess of the fair value of the physical property acquired by means of them. A balance sheet which does not show the good-will separately is of limited value to investors.

The fixed and permanent assets of a company, as pointed out in Chapter XXII, furnishes the tangible security for mortgage bonds. These assets comprise the company's permanent investment, with which it does business. In other words, it has no intention of parting with these assets either by converting them into salable products or by disposing of them for cash. Their appraised value, therefore, forms in many cases a basis of security for long term obligations, just as the market or appraised value of real estate underlies the security of a real estate mortgage.

Working Capital.—Usually in the case of industrial companies the amount of current assets in relation to current liabilities is of more importance than the values of the fixed

THE B. F. GOODRICH COMPANY
(A New York Corporation)
AND SUBSIDIARY COMPANIES

CONSOLIDATED BALANCE SHEET
December 31, 1924

ASSETS		LIABILITIES	
CURRENT ASSETS:		CURRENT LIABILITIES:	
Cash in Banks and on Hand.....	\$ 4,037,454.00	Bills Payable (Issued by Foreign Subsidiary Companies).....	\$ 124,949.91
United States Liberty Loan Bonds.....	10,000.00	Accounts Payable.....	2,524,882.41
Trade Notes and Accounts Receivable, after deducting Reserve to cover Doubtful Accounts, Discounts and Allowances.....	19,710,752.26	Sundry Accrued Liabilities.....	763,023.73
Other Notes and Accounts Receivable and Sundry Advances.....	306,343.42	25-Year 6 1/8% FIRST MORTGAGE GOLD BONDS DUE JULY 1, 1947:	
Raw Materials and Supplies, Partly Manufactured and Finished Stock.....	19,921,765.00	Issued.....	\$24,500,000.00
		Deduct—Bonds Redeemed and Cancelled.....	\$ 1,225,000.00
DUE FROM EMPLOYEES ON ACCOUNT OF PURCHASE OF COMMON STOCK, AND TREASURY COMMON STOCK.... (Employees' Stock deposited with Company as Collateral)	1,404,042.04	Bonds in Treasury for Cancellation.....	1,500.00
		Authorized but Unissued.....	\$ 500,000.00
13,684 SHARES OF 7% CUMULATIVE PREFERRED STOCK IN TREASURY, AT PAR	1,368,400.00	RESERVES FOR:	
INVESTMENTS AND ADVANCES TO OTHER COMPANIES.....	5,514,308.07	Contingencies.....	\$ 1,000,000.00
		Pensions.....	600,000.00
TANGIBLE CAPITAL ASSETS:		Miscellaneous (Including Rentals Received in Advance Applicable to Future Years).....	562,798.04
Real Estate, Buildings, Machinery and Sundry Equipment, less Reserve of \$13,159.510.46 for Depreciation and Obsolescence..	30,514,130.44		2,162,798.04

INTANGIBLE CAPITAL ASSETS:

This Balance Sheet does not take into account the Capital Asset of Good-will on the books amounting to \$57,798,000.00, nor the Patents or Trade-marks carried on the books at \$1.00, but shows the condition of the Company on the basis of Tangible Capital Assets

DEFERRED CHARGES TO FUTURE OPERATIONS:

Bond Discount and Other Refinancing Expenses, Prepaid Insurance, Interest, Taxes, Etc.....

CAPITAL STOCK AND SURPLUS:

7% CUMULATIVE PREFERRED STOCK—

450,000 Shares issued at \$45,000,000.00

Deduct—101,520 Shares redeemed and cancelled 10,152,000.00

\$34,848,000.00

100,000 Shares of 7% Cumulative Preferred Stock of the par value of \$100.00 each, authorized and unissued.....

\$10,000,000.00

2,088,698.14

COMMON STOCK—

Authorized 750,000 Shares of no par value.

Outstanding 801,400 Shares. \$60,112,000.00

Less—Exclusion of Intangible Capital Assets: namely, Patents, Trade-marks, and Good-will, per contra.....

57,798,001.00

\$ 2,313,999.00

Surplus appropriated for Amortization of War Facilities

1,225,063.73

Excess Surplus per annexed Statement.....

17,609,966.36

21,149,029.09

Employees' net credits on subscriptions to Stock not yet issued.....

39,708.19

\$84,885,891.37

\$84,885,891.37

Figure 11. Illustration of a Consolidated General Balance Sheet

assets as stated in the accounts. The current asset position or the net working capital should, therefore, be analyzed in studying the security behind bonds and stocks. These assets furnish the materials for making profits. Cash is the most important item among them because with cash a company can buy goods and materials, pay salaries and wages, extinguish debts and other liabilities. Receivables (notes receivable, and accounts receivable) are next to cash the most liquid, as they may be converted into cash by collecting them from debtors or discounting them at banks. Inventories represent goods, materials, supplies, etc., which are to be worked into finished products and disposed of presumably at a profit.

As already pointed out in Chapter XXIII, if a company is short of current assets it may either have to curtail its operations or borrow money to obtain needed raw materials, pay wages and meet current obligations. Accordingly, in order to reveal the investment merits of the bonds of industrial companies, bond circulars frequently show the amount of net current assets, *i.e.*, the amount of the working assets left after immediate or maturing liabilities are deducted. This figure of net working capital, as already stated on page 283, shows the immediate financial status of the company. The lack of sufficient working assets to meet current liabilities when due may cause receivership. Accordingly, in many mortgages of industrial companies there is a requirement that the corporation maintain its net working capital at no less than a certain fixed minimum. Thus, if the bond issue is \$1,000,000, the corporation may be required to maintain net working capital at \$750,000. In connection with the issue and sale of short-term obligations, the ratio of working capital to be maintained is usually much larger. In many instances, where a minimum net working capital is not specifically required, a prohibition is placed against the payment of dividends to shareholders, when such payments effect a reduction in net working capital below a certain amount.

Liabilities.—Set off against the fixed assets as shown in the general balance sheet are the fixed, or capital, liabilities, consisting of capital stock and bonds, the stock representing proprietorship and the bonds the capital indebtedness. It is not essential for financial soundness that the fixed or capital liabilities maintain a mathematical ratio to the fixed or capital assets, so that the term “net fixed assets” as used in financial analysis has no practical significance. Moreover, the bondholder need have no fear because of any large amount of capital stock outstanding unless the company is using up its cash by excessive payment of dividends. The attention of bondholders should be directed more to the current liabilities, such as the bills payable, the accounts payable, the unpaid accrued interest, and similar items of current indebtedness. Excessive current liabilities, as just pointed out, may bring about a default in the payment of bond interest, even though the corporation may show an excess of total assets over its liabilities to creditors.

Bondholders’ “Equity.”—The so-called “equity” of bondholders in the assets of a corporation is frequently worked out in the following manner: The net working capital, as explained above, is obtained by deducting the sum of the current liabilities from the sum of the current assets. To the resulting amount is added all the fixed tangible assets including the securities held for permanent investment, as stocks and bonds of affiliated corporations. The total shows the estimated amount of property covered by the bonds. It is, however, of no practical significance unless the basis of the book value of items in the accounts is known, *i.e.*, whether they are carried at the fair market values or not. Not infrequently the valuations of fixed assets in the accounts of industrial corporations have no relation to actual or fair values, but are placed at arbitrary amounts to offset the amount of capital stock and bonds issued.

Analysis of Capitalization.—In analyzing the capitalization of an industrial company a distinction must be made at the outset between its “capital” and its “capitalization.” Capital is the amount of actual money or equivalent value invested in the property. It comes both from the issue of securities and from profits. Capitalization, however, represents the nominal amount of securities outstanding, both bonds and stock. Profits turned back into the property become a part of the capital, but are not represented in the capitalization. It is clearly evident that capitalization even when originally paid in at face value in cash may not represent the actual value of the property.

Since the amount of capitalization may have no important bearing on the financial status of a corporation, the investor should direct his attention mainly to the capital structure, *i.e.*, the style or form of the capitalization. In this connection the amount of the fixed interest bonds outstanding in relation to both the capital stock and the average net earnings is of prime importance. Industrial corporations are, as a class, subject to sudden and pronounced changes in business conditions. Their profits are likely to fluctuate widely. A bond issue, therefore, which may have a high indicated margin of safety for interest payments during a period of prosperity may suffer default in a period of depression. Large bond issues bearing heavy fixed charges relative to net earnings over a long period of time have caused the bankruptcy of a number of industrial companies which had promising prospects at first. Stockholders can be shut off from dividends without causing insolvency, but bondholders are creditors and demand regularly and punctually the income which the corporation has obligated itself to pay them. Comparatively steady net earnings from year to year offer a sounder basis for safety of income than the irregular results arising from alternate feast and famine periods in industry.

Maturity and Repayment of Industrial Securities.—Industrial concerns, as a group, have not the permanency and stability of railroad and public utility corporations. For this reason, their obligations, as a rule, have shorter maturities. Moreover it is important in many cases that provision for repayment be made in advance of maturity, since refunding may prove a difficult if not impossible operation. Many industrial bonds have sinking fund provisions, or serial payment provisions, whereby the debtor corporation obligates itself to take up the loan in whole or in part by gradual instalments. Proper sinking fund arrangements is often a serious problem. Though, as pointed out on page 390, sinking fund or bond purchase outlays are not generally charged against current income, such charges, unless fully covered by surplus income, tend to reduce a corporation's cash resources. Cash outlays to cover sinking fund payments or to buy in bonds has been a potent cause of financial stress in several large industrials, since in order to meet these outlays the companies have been led to short-term borrowing from commercial banks. Thus, the sinking fund and other debt amortization provisions may result in merely converting long-term obligations into short-term liabilities. A good illustration of this situation is furnished by the financial experience of Wilson & Company in 1924. This large packing concern in 1918 and 1921 respectively, sold \$20,000,000 6% and \$10,000,000 7½% convertible debenture bonds. In connection with both issues, there were heavy amortization charges. The 7½% of 1921 were to be retired through payment of 5% of the principal amount in each of the years 1922 to 1926, 10% in each of the following two years and 15% annually thereafter. The other 6% issue, required a retirement appropriation of \$1,500,000 per year from 1921 to 1925 inclusive, and \$2,000,000 thereafter. In addition, the company was required by the terms of its 7% cumulative preferred stock issue, to retire 2% annually of original issue of \$12,000,000. The payments

aggregated in 1925 approximately \$2,250,000. Had increased profits developed after the issue of these obligations, the sinking fund provisions might have caused no strain on the company's resources, but because of the depression in the packing business in 1922 and 1923, the burden of the company's fixed charges, combined with impaired banking credit, became too heavy, with the result that a receivership was resorted to as a means of capital readjustment.

It is quite apparent that provisions relating to sinking funds, maturities and other conditions attaching to industrial bonds require study from two sides, *viz.*: (1) that of the security of the loan, and (2) that of the welfare and interest of the debtor corporations. Long-term securities issued at high interest rates, with severe provisions for amortization and with other hampering restrictions on the obligor, may, on the surface, appear to be favorable investments. But as these contractual agreements can be enforced effectively only during the solvency of the issuing companies, they may result in destroying the very factors of safety that are proposed to be set up. The interest of the security holders is bound up with the financial welfare and the stability of the creditor corporation, and any arrangement made for the benefit of the former, which seriously hampers the latter in its operations and fiscal relationships, may react unfavorably to both. This applies not only to interest rates, maturities and sinking funds, but to mortgage restrictions as well.⁵

Market.—Industrial securities find a market chiefly among individual investors. They are held also by commercial banks and other financial institutions but to a much less extent than railroad, utilities and other groups.⁶

⁵ The terms under which loans are granted to corporations by investment bankers are known as "the set up." They involve the most painstaking and scrutinizing considerations of bond experts and corporation lawyers.

⁶ No adequate statistics of the investments of the various classes of banking institutions in industrial bonds are available, as the Comptroller of the Currency groups these under the general item "other bonds, stocks, warrants, etc."

Savings banks and trustees in New York, Massachusetts, Connecticut and other states are not legally permitted to place their funds in industrial obligations, whereas commercial banks are in many cases not disposed to hold this class of securities as permanent investment or as a "secondary reserve" in the same way that government, railroad and public utility bonds are retained for this purpose. Because of the uncertain equity back of these new securities, bankers until within recent years were cautious in accepting them as collateral for loans. A rule was established for many years among bankers limiting the industrial securities to 35% of collateral offered on loans secured by New York Stock Exchange listed securities. There seems to be a tendency at the present time to break away from this regulation, and some New York banks are now willing to accept a much larger proportion of industrial securities as collateral than formerly.

Insurance companies have followed much the same policy as the banks in taking on industrial securities. The life insurance companies have not more than 4% of their holdings in this general group.⁷ Although fire and casualty companies feel free to diversify their holdings to a greater extent than the life companies, these also generally report but a small portion of industrials among their investments. There is an evident tendency, however, to look with more favor on sound and underlying bonds of well-established business corporations with proven earning power.

Undoubtedly, a principal reason for the improvement in the credit position of the industrials, as manifested by the market prices of their securities, is that these companies are passing out of the stage of infancy. The investor who purchased industrial securities a decade ago demanded a high income yield as a compensation for uncertainty both of income and of principal. The companies issuing those securities were then

⁷ Thus the Metropolitan Life Insurance Company at the end of 1924 held less than \$10,000,000 of miscellaneous industrial corporation bonds of a total of \$645,590,000 of investments.

of recent organization, their success was uncertain, and they were in the experimental stage. Many of these concerns, however, with the progress of time, have given evidence of stability and progress. This has led to appreciation of their securities and a corresponding decline in the income yield on their securities to investors. Thus, these issues are gradually moving from the so-called "speculative" class to the "investment" class. In this way they enter into competition with railroad securities, causing the latter to decline in value to a basis approaching to their own.

REFERENCES

- BADGE, R. E. *The Valuation of Industrial Securities*. New York, Prentice-Hall, Inc., 1924.
- COLLVER, CLINTON. *How to Analyze Industrial Securities*. Moody's Investment Service, 1917, 204p.

CHAPTER XXXI

SECURITIES OF FINANCIAL INSTITUTIONS

Shares of Financial Institutions.—The stocks of financial institutions furnish the best illustration of concerns which operate with borrowed capital on a large scale but whose shares are investment securities *par excellence*. The capital stock of several of the largest of these concerns are listed on the New York Stock Exchange and other important security markets. For the most part, however, they are sold “over the counter,” by brokerage houses that specialize in this class of business. Like railroads and public service companies, banks, trust companies and insurance organizations, as a group known as fiduciary institutions, are regulated and controlled by public authority. Every state of the Union, together with the federal government, exercises in some way or other the right of supervision over banking and insurance companies organized under their respective jurisdictions. Thus, there is considerable publicity of the operations of these institutions, since their accounts are usually made public by the government authorities.

Bank Stocks.—Reference has already been made in Chapter II to the fact that the shares of the early European banks, such as the Bank of Amsterdam and the Bank of England, became popular sources of investment in their respective countries. The growth and multiplicity of incorporated banking institutions, until the nineteenth century, was relatively slow. The first incorporated bank in the United States was the Bank of North America in Philadelphia, chartered by the Continental Congress in 1781. As more than one-half of the \$400,000 bank's capital was to be taken by the government, the institution, to all intents and purposes, was to be a

national bank, similar to the Bank of England. However, there was so much doubt as to the power of the Continental Congress to charter a bank, that a year after its incorporation, the Bank secured another charter from the State of Pennsylvania, under which it operated until 1864, when it entered the national banking system. Massachusetts, two years after the Bank of North America received its state charter, granted a charter to the Bank of Massachusetts, and in the same year, the Bank of New York began business, but was not formally incorporated until 1791, the year in which the first Bank of the United States received its federal charter.

During the first half of the nineteenth century, banks were freely chartered by the states. Their numbers multiplied and their shares formed the principal source of stock speculation in this period. Abuses in administration and in bank note issue became so flagrant that both the states and the national government gradually developed sound systems of regulation and control, which characterizes most of American banking of today. It was not until this stage was reached that the shares of banking institutions were placed on a solid investment plane.

The attractiveness of bank stocks as investments has been growing in recent years. The shares of the large institutions which for many years had been held mainly by relatively few and wealthy individuals are now becoming widely distributed in the same way as the shares of the leading railroad corporations. The methods of studying and the means of determining the investment merits of bank stocks, however, has, as yet, received but slight attention from investment organizations.

Analyzing Bank Statements.—Banks and trust companies do not ordinarily publish income statements, but they are generally required to published their individual balance sheets four or five times a year, the standardized form of which is shown herewith. The actual capital of a bank, as distinct from

its borrowed funds, is usually shown in three items—capital, surplus and undivided profits. (See Figure 12.) At times there may be a transfer from the “undivided profits” to the

The National City Bank of New York <i>including</i> Domestic and Foreign Offices Condensed Statement of Conditions as of December 31, 1924			
ASSETS			
Cash in Vault and in Federal Reserve Bank	\$100,968,098.95		
Due from Banks, Bankers and United States Treasury	167,309,928.96	\$	268,278,027.91
Loans, Discounts and Acceptances of Other Banks			584,744,667.76
United States Government Bonds and Certificates	\$ 76,510,451.35		
State and Municipal Bonds	32,318,284.26		
Stock in Federal Reserve Bank	2,550,000.00		
Ownership of International Banking Corporation	12,500,000.00		
Other Bonds and Securities	68,577,887.60		192,456,623.21
Bank Buildings			13,910,637.25
Items in Transit with Branches			20,092,678.47
Customers' Liability Account of Acceptances			61,162,679.58
Other Assets			1,684,357.34
TOTAL			\$1,142,329,671.52
LIABILITIES			
Capital	\$ 40,000,000.00		
Surplus	45,000,000.00		
Undivided Profits	10,297,556.73	\$	95,297,556.73
Deposits			913,082,261.64
Liability as Acceptor, Endorser or Maker on Acceptances and Foreign Bills			117,917,056.00
Circulation			956,195.00
Bonds Borrowed			775,000.00
Reserves for:			
Accrued Interest, Discount and other Unearned Income	\$ 2,822,127.36		
Taxes and Accrued Expenses, et cetera	4,290,424.19		
Dividend Payable Jan. 2, 1925	1,600,000.00		
Contingencies	5,589,050.60		14,301,602.15
TOTAL			\$1,142,329,671.52
Above includes The National City Bank of New York (France) S. A.			

Figure 12. National Bank Statement

“surplus” account, but this is merely a bookkeeping transaction, as both items are really surplus. The earnings of a bank may be discovered by a comparison of the latest “sur-

plus" and "undivided profits" items with similar items of an earlier date (unless there has been a change of capital or payment of dividends to shareholders in the period). Earnings thus shown are net earnings. They are not subject to deduc-

THE CORN EXCHANGE BANK	
NEW YORK	
November 15, 1924	
The Bank Owes to Depositors	<u>\$237,215,220.29</u>
A conservative banker always has this indebtedness in mind, and he arranges his assets so as to be able to meet any request for payment.	
For This Purpose We Have:	
[1] Cash	\$ 37,198,099.73
(Gold, Bank Notes and Specie) and with legal depositories returnable on demand.	
[2] Checks on Other Banks	13,425,516.24
Payable in one day.	
[3] U. S. Government Securities	65,393,921.71
[4] Loans to Individuals and Corporations	21,253,689.07
Payable when we ask for them, secured by collateral of greater value than the loans.	
[5] Bonds	42,301,027.89
Of railroads and other corporations, of first quality and easily salable.	
[6] Loans	65,531,761.95
Payable in less than three months, on the average, largely secured by collateral.	
[7] Bonds and Mortgages	9,553,613.97
[8] Banking Houses	6,013,826.77
All located in New York City.	
[9] Other Real Estate	37,135.73
Total to Meet Indebtedness	<u>\$260,708,593.06</u>
[10] This Leaves a Capital and Surplus of	<u>\$ 23,493,372.77</u>
Which becomes the property of the stockholders after the debts to the depositors are paid, and is a guarantee fund upon which we solicit new deposits and retain those which have been lodged with us for many years.	

Figure 13. Analysis of a Bank's Liquid Position

tions for depletion or depreciation, as with many other lines of business. The undivided profits are set up only after providing for all accrued debits, such as taxes, interest and reserves against foreseeable contingencies.

A convenient method for analyzing a bank statement has

been adopted by the Corn Exchange Bank of New York. This statement, as shown herewith, has in view the counterposing of the bank's assets or resources against its liabilities. (See Figure 13.) It will be noted that the assets are arranged in the order of their ready convertibility into cash, the long-term investment securities and the bank's real estate coming last. In this way, the "liquid" position (*i.e.*, its ability to meet "runs" of its depositors) can be judged. With the possible exception of cash and checks held for collecting and the bank's real estate used for its business, all the assets are "earning assets" since they are interest-bearing or profit-making investments.

Unlike most industrial concerns, the bulk of a commercial bank's assets are or should be in cash or claims readily liquidated for cash. The liquidation value, or "book value," as it is frequently termed, of bank shares, accordingly can be readily computed. "Book value" is an indication of the amount of assets which would be received by the owner of each share of stock if there were to be a liquidation of the bank exactly in accordance with its balance sheet. Inasmuch as the assets and liabilities must be equal, the paying out of assets to meet all liability items except the technical liabilities of capital, surplus and undivided profits, would leave an amount of assets exactly equal to capital, surplus and undivided profits. In practice, therefore, "book value" is found by adding together these three items—the capital, surplus and undivided profits, and then dividing the sum by the number of shares.

Relationship of Capital and Surplus Items.—Although the stockholder's equity in the assets of a bank is represented by the amount of the capital and surplus items, these items combined form a reserve or trust fund for the protection of a bank's creditors. In other words, a bank solicits and procures deposits (*i.e.*, credit) on the basis of its capital and surplus.

The larger ratio of these items combined to the deposits and other liabilities outstanding against the bank, the greater the security afforded creditors. It is mainly for this reason that banks are generally required not only to keep their capital unimpaired, but also to provide or accumulate a surplus above the amount of the capital. By having capital unimpaired means that the total assets of the bank should be in excess of all liabilities except the capital. Thus, if a bank has assets of \$1,000,000 and liabilities aggregating \$1,010,000, including its capital of \$100,000, the impairment of capital would amount to \$10,000, or 10%, as shown in the following tabulation:

Assets.....	\$1,000,000	Liabilities, except that owing to shareholders.....	\$ 910,000
Deficit in capital.....	10,000	Capital Stock paid in.....	100,000
	<u>\$1,010,000</u>		<u>\$1,010,000</u>

In order to avoid a contingency of impairment of capital, it is essential that a bank in common with other financial institutions maintain a surplus of considerable size in relation to its capital. Provision for the surplus is frequently made when the bank is organized. This is known as "paid in surplus," to distinguish it from surplus arising from the profit accumulations. Surplus paid in and accumulated as a permanent reserve liability is likewise distinguished from the "undivided profits" item, representing amounts available for distribution as cash dividends to stockholders.

Double Liability of Bank Shares.—Shareholders of national banks and of the banks organized under the laws of New York, Massachusetts and several other states, in the event of insolvency of the bank whose shares they own, are liable to its creditors to the face amount (*i.e.*, par value) of their shares. This places such bank shareholders partially in the legal relationship of partners in the enterprise. The so-called "double liability" attached to bank shares may sometimes deter investors from purchasing these securities. It undoubtedly

operates with some force in the case of new or small institutions which are without substantial "paid in" or accumulated surplus items. With respect to shares of institutions selling at a high premium above the par value, the double liability is a negligible factor. Thus, a stock of a nominal par value of \$100 which sells at \$600 per share, renders the holder in the event of the bank's failure, to an additional liability of but \$100, or but $16\frac{2}{3}\%$ of the market price. A stock of similar par value, when it sells at \$150, however, makes the contingent liability $66\frac{2}{3}\%$ of the purchase price. In view of this condition, together with other factors, such as expectation of stock as well as cash dividends, the most desirable bank shares for investment are those selling much in excess of the par value.

Sources of Bank Profits.—To comprehend fully the investment background of bank stocks, one should know something of the source of bank profits. A bank was defined three centuries ago by Daniel Defoe as "only a great stock of money." This definition is essentially applicable to the modern bank. Unlike many other business concerns, banks of deposit, or commercial banks, rely for their profits mainly on the employment of borrowed money. In other words, the largest part of the "stock of money" held or used by a bank is not contributed by its shareholders, but placed at the bank's disposal by depositors. It is through the use of the depositors' funds in granting interest bearing loans or in purchasing or discounting interest-bearing obligations that banks obtain their largest profit with which their stockholders are paid dividends. Hence, the relative earning capacity of a bank, other things being equal, is determined by: (1) the amount of deposits held in relation to the bank's capital stock and surplus, and (2) the employment of these funds in making loans and investments.

To illustrate the foregoing: A bank has a capital represented by cash subscriptions of shareholders of \$1,000,000. If all this capital were used in granting loans to customers,

the maximum return could hardly be more than 6% annually, or \$60,000. But with \$1,000,000 capital, the bank may receive deposits of \$5,000,000. Of the latter amount, it may be assumed that all but 20% could be loaned out at 6% annually. Thus, \$4,000,000 of deposits and \$1,000,000 of capital, a total of \$5,000,000 is available for "earnings assets," which at an assumed rate of 6% per annum, would bring in a return of \$300,000, equivalent to 30% on the bank's capital. Banks, of course, have operating costs, taxes, losses and other expenses which are paid from their gross earnings obtained from lending money, making investments, and performing other banking functions, so that the net profits on the total capital funds employed in the business are generally but a fraction of the rate indicated above.

Finance Company Shares.—A new class of investment stocks similar to bank shares, which have lately sprung into popularity, are the shares of concerns variously termed finance, discount or credit companies. Something of the functions of these concerns has already received notice in the chapter on commercial credits. Although dating back hardly more than two decades, there were in the United States at the end of 1924, exclusive of mortgage companies, considerably more than 200 finance and credit companies, with an aggregate capitalization of from \$150,000,000 to \$300,000,000. Each concern, as a rule, limits its operations to a special field. As pointed out by the Federal Reserve Board:

Their business may include one or more of the following: (1) Discounting or buying commercial receivables—*i.e.*, accounts, notes, or acceptances; (2) advancing funds to dealers with which to purchase automobiles (wholesale sale of automobiles); (3) advancing funds to enable dealers to sell automobiles on the instalment plan (retail sale of automobiles); (4) advancing funds to enable dealers to sell furniture, agricultural implements, books, musical instruments, refrigerators, restaurant fixtures, household utensils, electrical appliances, machinery, etc., on the instalment

plan; (5) advancing funds against merchandise. Specialization is noticeable, especially in connection with discounting receivables and financing automobiles. Scarcely any companies undertake all the above classes. The larger firms in the field usually limit themselves to discounting receivables and financing automobiles. These, at present, handle the largest amount of the total volume of business done.

The business of these concerns is growing rapidly. In the eastern states their annual business is estimated at between one-half and three-quarters of a billion dollars. The capitalization of the individual companies varies from a few thousand to several million dollars. The average size of those that specialize in discounting commercial accounts receivable is larger than those financing automobiles. The latter can start out successfully with small capitalization under an exclusive contract with some large automobile manufacturer or dealer, on the basis of which they can obtain loans or sell additional shares. On the other hand sellers of accounts receivable prefer to deal with established and large concerns instead of with a small or new company.¹

Finance and credit companies, with a few notable exceptions, have been formed by groups of individuals obtaining a charter from one of the states of the Union; usually from one where the state laws are favorable to such companies, and where the taxes are not exorbitant. In New York a number have incorporated under the banking laws of that state and are subject to regular examination by the state's banking department. The authorized capitalization is usually, though not always, composed of a certain amount of preferred and common stock. The preferred stock is very similar to the preferred stocks of modern industrial corporations, with the same preferences and limitations. The par value of the respective

¹ Several large automobile concerns have directly organized their own finance companies. Among these is the General Motors Acceptance Corporation, the shares of which are owned by the General Motors Corporation.

stocks is made to serve best the needs of the organizers, and common shares without par value have been issued.

Sources of Finance and Credit Company Profits.—As finance and credit companies do not receive deposits, their earnings would be relatively small, were it not possible for them continuously to borrow by pledging their assets as collateral. Nearly all discount companies supplement their capital by this sort of borrowing. Commercial banks are the principal source for their borrowed funds. Some of the larger companies, however, have established their credit in the open market and borrow through sale of their paper to investors and institutions.

The most common form of obligation used in borrowing, both with banks and in the open market, is the collateral trust note. The collateral behind these notes consists of receivables deposited with a trustee, generally a trust company. The usual required margin of the value of the collateral above the face value of the notes, is 20%, but some companies keep far in excess of this amount. The maturity of the notes, in order to be made acceptable for purchase by commercial banks, is limited to not over six months but they can be readily renewed without disturbing the collateral. The notes are issued in series, with denominations of \$100 and multiples thereof. The rate of interest or the discount rate on these notes varies from $4\frac{1}{2}$ to $8\frac{1}{2}$ %, according to credit conditions at the time they are issued and marketed.²

It should be borne in mind that with ready facilities for borrowing at low interest rates, finance and credit companies can show as large earnings on their capital in the same manner as banks and insurance companies. Thus, a company with outstanding capital stock of \$100,000 that has a business of \$500,000 annually on which a net profit of 8% is earned, can, by borrowing \$400,000 at 6%, show a return on its shares

² See *Federal Reserve Bulletin*, January 1923.

of 16% annually. If one-half, or \$50,000, of its capital consists of 7% preferred stock, the earnings available for the common shares would be equivalent to 25%. The common shares of several of the larger and successful finance and credit companies accordingly have already rewarded their holders with substantial cash and stock dividend disbursements. Much of this has been due to a system of using borrowed capital at lower rates of interest than they charge in making advances to their own customers. A small margin of difference in these rates may afford large surplus earnings computed on the basis of the capital furnished by shareholders.

REFERENCES

- LANGSTON, L. H. *Practical Bank Operation*. New York, Ronald Press Co., 713p.
- MERRICK, ROBERT G. *The Modern Credit Company*. Baltimore, Norman, Remington Co., 1922, 64p.
- WESTERFIELD. *Banking Principles and Practice*. New York, Ronald Press Co.

CHAPTER XXXII

INSURANCE COMPANIES AS INVESTMENTS

Insurance Stocks.—Insurance stocks as investments are very similar to bank stocks. They are dealt in by the same brokerage and investment houses and are, on the whole, purchased by the same class of investors. As already stated, insurance companies, like banking institutions, are subjected to public regulation and supervision in the states in which they operate. Unlike banks, however, they are not ordinarily restricted in their business to a single locality or the state under which they are chartered. The basic feature of the insurance business, *vis.*—the distribution of risks—requires in most cases that their operations cover a broad area. Largely for this reason companies organized under laws of one state are permitted to do business in other states, provided always, however, that they comply with the legal requirements of the latter.

History of Insurance Companies.—Property insurance is among the oldest forms of business enterprise in the world. It is said to have existed as a business in India many years before the Christian era, and the Sanskrit language contains the equivalent of the modern word insurance. The oldest fire insurance known to history is that which existed in the communes of Assyria and the Far East more than 2500 years ago. The records indicate that judges, priests and magistrates were appointed for each town or district with power to lay contributions against some calamities. This practice was followed by the mediæval guilds and existed to some extent until after the time of the London Fire (1666). Such insurance, however, whereby contributions to pay losses were levied after

the occurrence of the calamity has been superseded by modern insurance companies which require advance payments from the insured with which to meet contingent losses. This change in method combined with the application of the theory of wide risk distribution has made the insurance business a commercial success.

At the time of the London Fire in 1666 there were no private fire insurance companies in England. There is evidence, however, that the business did exist on the European Continent, since Sir William Petty, an early English economist, mentioned its existence in 1662. In Beckmann's *History of Inventions* a full account is given of an insurance scheme submitted to Count Anthon Gunther of Oldenberg, Germany, in the year 1609. The scheme proposed that the count in return for the advance payment of a premium by property holders should insure the latter against fire losses. The count, however, was superstitious and feared that he would incur divine disfavor by such provisions against fate, and therefore recommended that a private company be formed for the purpose.

Although there is no record of private fire insurance in England until after the Great Fire, marine insurance was quite well known and widely practiced. When the British Parliament in 1601 provided for stable marine insurance enterprises, the preamble to the act stated that, "time out of minde it had been used by merchantes both of this realme and of foreign nations." The first fire "insurance office" in London was that of Dr. Nicholas Barbon who was one of the sons of "Praise-God Barebone" of the Cromwellian Parliament. Barbon, who was both a physician and economist, was also one of the largest London builders after the Great Fire. In 1667 he "set up an office" for insuring buildings in London. It was at first his personal business, but in 1680 a company was formed to take over the enterprise, and assumed

the name of "The Fire Office." Other companies were soon after organized, several of which, such as the Sun Fire Office and the London Assurance are still in existence. Thus begun the first modern insurance company in Europe. The business has since spread throughout the world. There is not a civilized country where fire insurance on a commercial basis does not prevail.

As with banking, insurance enterprises developed rapidly in the United States after the Revolutionary War. The first company to be incorporated as a business enterprise was the Insurance Company of North America, chartered by the State of Pennsylvania in 1792. It was followed two years later by the organization of the Insurance Company of the State of Pennsylvania. Both these companies, like the Bank of North America, have been in continuous operation since organization. Companies were later chartered in Massachusetts, Connecticut, New York and other states. Life insurance companies, conducted for purposes of profit did not become common in the United States until about the middle of the last century. This business originally was considered as a function of trust companies, and among the earliest concerns undertaking the line was the Pennsylvania Company for Insuring Lives and Administering Trusts, chartered in 1812. The New York Life Insurance and Trust Company, incorporated in 1830 also originally conducted an insurance business.

The life insurance business has in later years tended toward the mutual form of organization, many stock companies having been converted into mutual companies, in which the policyholders control the operations and obtain the profits, if any. Casualty, fidelity and other classes of personal and property insurance have been developments of the last half-century, and like the fire insurance business, these enterprises are conducted by corporations for purposes of profit.

The Safety of Insurance Company Stocks.—Insurance has become one of the safest of modern business enterprises. Its safety as a whole is based on the following conditions:

1. Ascertainment through experience of the probable losses of the business by means of averages.
2. The distribution of risks.
3. Government regulation and supervision of activities.
4. The ease of converting assets into cash.

Each of these will be considered in turn.

THE LAW OF AVERAGES.—In no other business is the extent of risk so easily ascertained as in fire and life insurance. The fire insurance business particularly through centuries of experience has become so well standardized that risks can be closely estimated. Hence, the business can be readily based on the “law of averages” which may be more properly termed the “law of experience.” In making all fire insurance rates some phase of the “law of average” is applied.

In case of groups of properties, where but few differences exist in the class, such as residences, schools, etc., the rate for the class is applied, and allowance made for the type of construction, and the presence or absence of efficient fire protection. On the other hand, in the case of “special hazards” as mills, elevators, warehouses, etc., special schedules are prepared. These, generally speaking, describe a building which is “standard” as regards construction, arrangements of processes, and fire extinguishing facilities. For such a standard risk a basis rate is then adopted, which, in the judgment of experts, measures the various factors pertaining to the hazard, defects in construction, arrangement, and fire-protection facilities, as compared with the defined standard building. On the other hand, certain deductions are made for unusually good features as compared with the standard. Deductions or charges are made also for the presence or absence of co-insurance,

faulty management, exposure hazards, and other features, and in nearly all cases the penalties in the form of additions for defects are made so heavy as to furnish a strong inducement for the installation of improved methods of construction and operation. In most instances, expert rating service is given by men acting for a group or association of companies.

THE DISTRIBUTION OF RISKS.—The distribution of risks is the fundamental principle of insurance. It is accomplished by (1) spreading the risks underwritten by a single company over large territory, and (2) by reinsurance. Thus, no one fire insurance company assumes the entire risk of losses on a large building. In any one section of a town or city, the risk of an individual company is similarly limited so that the loss from a large conflagration is generally distributed among hundreds of insurance companies, both domestic and foreign. The financial loss is, therefore, spread throughout the whole world.

Reinsurance also plays an important part. The purpose of reinsurance is to diversify the liability in insurance risks and thereby eliminate heavy losses on any one building or in any single locality. By thus carefully restricting their "lines" and having all surplus lines (*i.e.*, excess of risks in one locality) reinsured, the liabilities of individual companies are so well distributed that even unusually large conflagrations like those in Baltimore and San Francisco will result in but few failures to meet insurance obligations.

STRICT GOVERNMENT REGULATION.—All the states of the Union guard carefully the solvency of insurance companies doing business in their respective jurisdictions. Companies are required to conform to statutory regulations and rulings aimed to protect both the insurer and the insured. The rates and charges, and even the investments are prescribed by law, and the records and activities of the companies are subject to inspection and supervision as closely as in the case of banks or any other public enterprise.

CASH EQUIVALENT OF ASSETS.—The assets of insurance companies consist almost exclusively of readily marketable securities on which definite cash value can be placed at any time. This is necessary in order to enable insurance companies to meet losses as they occur. Insurance companies, therefore, have ordinarily little “dead” or “unrealizable” assets as is the case in most other kinds of business. There is no problem of computing depreciation or guessing at market value of assets, as the assets are required to be listed at market values on the books of the companies. The stockholder accordingly can readily estimate the equity or cash value of his insurance stock. Even in a liquidation he can count on the approximate cash value, since a life, fire or casualty insurance company can easily rid itself of its underwriting obligations by disposing of its assumed risks to other companies and by selling its “admitted assets” (*i.e.* its securities) in the open market.¹

How Insurance Companies Make Profits.—The profits of marine, fire, casualty and fidelity insurance companies come from two distinct classes of operations, *viz.*: (1) underwriting on “trading” profits, and (2) investments.

UNDERWRITING PROFITS.—This net income derived by insurance companies in underwriting risks is, with few exceptions, not the most profitable end of the business. In return for an agreement to indemnify an insurer for loss or damage during a given period the insurance company receives a cash payment known as a premium. The amount of this premium is fixed in each case at a figure that will compensate the insuring company for the risk it assumes and pay its cost of operations (including commissions, brokerage fees, taxes) and permit a small item of profit. Since in no other business is the extent of risk so accurately ascertained as in life and prop-

¹ Assets not readily liquidated, such as furniture, equipment and the like are not included in the “admitted assets.”

erty insurance, the rates tend to be adjusted to the sum of the normal losses incurred combined with operating expense of companies. Roughly speaking, losses of a fire insurance company on a business which is of reasonably stable volume should average over a period of years between 55% and 60% and expenses between 40% and 50%. There is accordingly, at best but a very small profit on the direct insurance operations, yet in many cases, fire insurance companies, because of their investments, can pay handsome dividends to shareholders in times when actual loss is incurred in the insurance end of the business.

INVESTMENT OF PREMIUM FUNDS.—The main source of profits of insurance companies is the investment of premium receipts. In this respect it resembles a bank in which the profits on its own capital amount to very little, whereas the income from the use of depositors' funds in proportion to its capital is generally large. As has been pointed out, the capital of banks and insurance companies represent reserve funds, whereas the "earning assets" are the funds entrusted to them (*i.e.*, deposits in the case of banks, and "premiums" in the case of insurance companies). Thus, an insurance company with a capital of \$100,000 can readily have at one time advance premium payments of \$1,000,000 or more in its possession. If the company is enabled to earn by profitable investment but 1% on this sum in a year, it will have annual net earnings from this source alone of \$10,000, or 10% on its capital. As already stated, the current loss hazards and the operating expenses are usually paid from the premiums received.

Analysis of Insurance Company Statement.—Insurance companies, like banks, generally publish only their balance sheets at stated intervals, usually once a year. A typical statement of a fire insurance company is given in Figure 14. The items are not all considered below, since only few of the items

in the statement that are peculiar to the insurance business require explanation here. The reader has already been made acquainted with the general nature of the other items in the chapter dealing with corporation financial statements. Two items among the liabilities in an insurance company's balance sheet, however, are not generally understood. These are the "reserve for unearned premiums" or "premium reserve" as it is sometimes designated, and the "loss reserve." In addition, the "capital" and "surplus" items should command the special attention of investors in insurance companies shares.

THE CONTINENTAL INSURANCE COMPANY	
ANNUAL STATEMENT	
<i>Seventy-First Annual Statement—January 1st, 1924</i>	
ASSETS	LIABILITIES
Bonds and Stocks (Actual Market Value Dec. 31st, 1923)...	Unearned premiums.....
\$43,119,854.00	\$21,011,451.35
Real Estate.....	Losses in process of adjustment..
1,637,167.35	2,401,808.49
Loans on bond and mortgage...	All other claims.....
1,149,689.73	704,978.40
Premiums in course of collection	Reserve for contingencies and dividends.....
3,154,603.25	1,600,000.00
Interest, dividends and rents accrued.....	Capital.....
442,072.42	\$10,000,000.00
Cash on deposit and in office...	Net Surplus..
2,485,241.21	16,270,389.72
Total Assets.....	Policyholders' Surplus.....
\$51,988,627.96	\$26,270,389.72
	\$51,988,627.96

Figure 14. Insurance Company Statement

The Premium Reserve.—The premium reserve constitutes the unearned portion of a fire insurance company's business and is regarded as a fund held in trust for a company's policyholders. The nature and purpose of the reserve in fire insurance becomes apparent if we take into account the manner in which a company earns its premium. Thus, let us suppose that a company issues an annual policy for a premium of \$120. This premium is payable in advance, and since the policy has a year to run, it is clear that the company has not yet earned this sum, but will become entitled to it progressively as the policy reaches its maturity. At the end of the

first month one-twelfth of the term has elapsed, and the company can rightfully consider that part of the premium, or \$10 as earned. Eleven-twelfths of the premium, however, or \$110 must be considered unearned, since the company has not yet furnished protection for the eleven months remaining in the term. At the end of six months, one-half of the premium, or \$60, is earned, and the other half unearned. It is not until the end of the twelfth month that the company has furnished the full year's insurance and is, therefore, entitled to the full premium. The premium reserve is, therefore, known as the amount of "unearned premiums." It is sometimes also called the "reinsurance reserve" for the reason that by turning over all or part of the reserve to another company the insurance company can thus reinsure its complete liability to policyholders and go out of business if it desires.

The premium paid to fire insurance companies, similar to life insurance premiums, comprises payments for two purposes, *viz.*: (1) to cover the liability of the company to the insured against fire loss, and (2) to cover the operating expenses of the insurance company. An increment is also added to furnish the company an "underwriting profit." If a company cancels an insurance policy, it returns to the policyholder an amount equal to the proportion represented by the time that the policy was in force to the total time the policy was to run. Thus, if the policy is to run for one year and it is cancelled one month after it is in force, eleven-twelfths of the premium is returned to the policyholder. On the other hand, should a policyholder cancel his policy after one month (or at any time before it elapses) he does not receive back an amount proportionate with the unexpired period of the policy, but a smaller percentage. The reduction in this case is to offset the commissions and expenses paid in acquiring the business together with a reasonable allowance for the operating expenses and the profit on underwriting. As a large part of the cancellations of insurance companies comes from policyholders, the

premium reserves of the insurance companies are accordingly usually in excess of actual requirements. This excess is the property of the stockholders and eventually finds its way into the company's surplus. Moreover, as the premium of insurance companies is generally invested in income bearing securities as soon as received, the investment income also belongs to the stockholders and goes into surplus to be paid out in dividends or retained as the company's management desires.

The premium reserve, therefore, is a double benefit to stockholders though maintained primarily for the protection of policyholders. It protects them against losses from policy cancellations and from risks underwritten; in addition it furnishes them possible profits arising from the investment of the unearned premium reserve. Such profits are regarded as the property of the company's stockholders, and are not applied as a reduction of rates charged policyholders for insurance.

Usually when a new company enters business, the amount that it is required to set aside in the reserve fund, when added to the loss and expense disbursements that it undergoes while waiting to earn the premiums exceeds the sum of the premiums written. This would create an impairment of capital did not the stockholders pay in enough surplus to tide it over until such time as a sufficient earned surplus can be created. Accordingly, insurance companies, like banks, generally begin business with a "paid-in surplus" in addition to the money represented by its capital stock.

The Loss Reserve.—Whenever a loss covered by one of its policies is reported, the insurance company if conducted properly immediately sets up in a reserve the full amount of such reported loss. The sum of such losses in any year is reported under "losses incurred." As the reported losses, however, are usually in excess of the actual amounts thereof required to be paid by fire and casualty insurance companies and as it normally requires several months before adjustments

with the insured are finally completed, the loss reserve carried is also usually in excess of the amount actually required by the company. This excess in the case of a fire insurance company, as shown on page 421, is estimated to be about 15% of the amount set up for the purpose.

The separation of a part of the company's surplus as a loss reserve does not require that the company segregate the amount thereof and maintain it in cash. The loss reserve, like the premium reserve, is invested in securities on which the company can earn an income as long as the reserve is maintained.

Capital Stock.—As in most corporations having shares of a nominal or par value, the capital of a fire insurance company is the aggregate face value of shares of stock issued by such companies. In most states, the full amount of an insurance company's capital must be originally paid in entirely in cash and, accordingly, the stock must have a par value. The par value of the capital, however, in most insurance companies is merely nominal and does not represent the entire cash capital contribution made by stockholders. As stated above, it is the usual practice for fire insurance companies to begin business with a "paid-in surplus" representing cash contributed over and above that represented by the face value of the company's shares. Moreover, unlike bank stocks, insurance company stocks are not subject to double liability. When once the stock has been fully paid in, the stockholders are not subject to any further assessment to meet the company's obligations or the impairment of its capital.

Surplus.—The surplus in the financial statement of an insurance company is the reservoir into which profits and income flow and from which losses and dividends are paid. Like the premium and the loss reserves, together with the capital of the company, the surplus is ordinarily invested in income bearing securities. The aim of insurance companies is to keep

this reservoir at as high a mark as is consistent with sound insurance and business practice, and in view of the fact that the surplus does not differ from capital in creating earning power and affording financial protection to policyholders, the capital and surplus of insurance companies are frequently combined into one item which is technically known as the "Surplus to Policyholders." In reinsurance companies the item is usually designated as "Surplus to Treatyholders."²

The combined capital and surplus of insurance companies determines to a great extent their credit standing and regulates the amount of business that the company can undertake. Inasmuch as an insurance company is not permitted to do business if its capital should become impaired (*i.e.*, should its surplus disappear and the liabilities of the company, including the capital stock, exceed the assets), a large surplus is as essential as ammunition and guns to a battleship. It is a prime purpose of well-managed standard insurance companies to constantly maintain a surplus which shall not fall below a certain proportion of the capital stock.

Inasmuch as fire and casualty insurance companies are required to set up in a reserve fund the full amount of premiums received, without making deductions for such expenses as agents' commissions and other costs that they pay out immediately upon taking up new risks, a substantial or unusual increase in the premium reserve frequently effects a corresponding reduction in the surplus. Thus, the annual statements published by the fire insurance companies of their business during the year 1923 showed in nearly every case a fairly substantial decrease in surplus, but a marked increase in premium reserve. Without a knowledge of the principles of insurance stock values an investor might suppose that this was not a good showing and that the reduction of the surplus account impairs the intrinsic value of the stock. The contrary, how-

² Reinsurance companies do not do business directly with the public, but through contracts or treaties with other "direct writing" insurance companies.

ever, is true and such a showing is indicative only of a considerable increase in business to be reflected later in larger earnings and a greater surplus in the future. For this reason fluctuations in an insurance company's surplus item should always be studied with respect to changes in the amount of the premium reserve.

Computing Insurance Stock Values.—In determining the value of any insurance company stock, such considerations as the past record of growth, the record of dividend disbursements and the present resources of the company are important factors. The book value of an insurance stock is an entirely inadequate measure of value. The reason for this is the fact that, as pointed out above, the stockholders of nearly every insurance company have an equity of considerable amount in the company's reserve accounts. The accounting and the financial statement of a life insurance company are so complex that it is impossible to arrive at even an approximate estimate of this equity. To determine this hidden value in the case of a fire company, however, a general rule which is fairly accurate is customarily used.

The book value of the capital stock of a fire insurance company, as of any other corporation, is of course, the sum total of its capital and net surplus accounts. The addition to that amount of that part of the premium reserve account which is equal to the company's ratio of expenses would bring the shares actually to the point of liquidating value. That amount is added, to arrive at the liquidating value, because the ratio of expenses has not only been incurred, but has been paid out of the company's funds, and in addition, the full amount of unearned premiums with no allowance for those expenses already paid has been put into the book liability called premium reserve. The application of this rule indicates an equity for fire insurance company stockholders in premium reserves which averages about $33\frac{1}{3}\%$. Thus, if the pre-

mium reserve is \$1,000,000, the stockholders' equity is computed at \$333,333, which sum should be added to the equity of each share of stock represented in the capital and surplus.

Over and above liquidating value, there is a still further real, but intangible and indeterminable value which is represented by "good-will." In the case of a direct writing company, this consists largely of the loyalty of its agency staff and the reliance placed upon the company and its agents by the policyholders. The "good-will" of a reinsurance company is represented by the confidence which the direct writing companies have in the ability of the reinsurer to protect them against a share of the policies they have issued, judged in each individual case by the term of years which a contract has been in force and reflecting the mutual satisfaction and confidence in each other's ability to correctly carry out contracts. It is extremely difficult to set any value on a direct writing company's agency plan or on any insurance company's contract relations without an exhaustive study of the company's connections, which of course, are never open to public review. That they are of very great value, however, would not for a moment be denied by anyone acquainted with the insurance business.

REFERENCES

- Best's Insurance Reports.* Alfred M. Best Co., Inc., New York. (Issued annually.) (A standard reference authority.)
- HUEBNER. *Property Insurance.* New York, D. Appleton & Co., 1919, 421p.
- KETCHAM, E. A., AND MURRAY, KETCHAM-KIRK. *Essentials of the Fire Insurance Business.* Published by the author, 1922, 386p.



APPENDIX A

SOURCES OF BOND INVESTMENT INFORMATION ¹

The references and sources of information relating to investment are of four general classes, *viz.*:

1. Primary documents, such as laws and ordinances, original incorporation papers, annual reports, stock exchange listing statements, mortgages, and other publications issued directly by governments, municipalities, and corporations.
2. Statistical and financial manuals, including the periodical reports and publications of government statistical organizations, public service commissions, and other government regulating bodies.
3. Textbooks and treatises.
4. Financial and trade periodicals.

Primary or Original Sources.—These consist of the various incorporation and other legal papers or legal documents of governments, and business corporations on file with public authorities, *viz.*: the Secretary of State, public utility commissions, or the Interstate Commerce Commission; the actual mortgages as filed in the public records; reorganization papers; the annual reports of corporations to their stockholders; and the statements furnished to stock exchanges when application is made to list securities thereon, together with such other documents and reports as are prepared directly by or under the auspices of the corporations or their officials.

Much of this material is not available to the average student, and except in special cases requiring detailed investigation it may not be found essential. From a practical standpoint it is hardly necessary to have even a partial file of such documents, for the secondary sources mentioned below furnish in more convenient form all that is usually required to obtain essential investment information.

Statistical and Financial Manuals.—These consist of the standard publications issued by private publishing concerns, and the periodical official publications of the Interstate Commerce Commission and other public authorities. Among the leading private publications are the following:

1. *The Statesman's Year Book*. This is a statistical and historical annual of the states of the world and is issued yearly by Macmillan and Company, London. It is a standard reference book.

¹ Originally issued in *Elements of Bond Investment*.

2. *The State and City Section of the Commercial and Financial Chronicle*. Issued once a year but in two parts; the first part covering New England, the Middle and Central states appears in June, and the second part covering the remaining states appears in December. They contain financial and statistical data relating to the states and cities of the United States.

3. *Kimber's Record of Government Debts* (formerly the *Fitch Record of Government Finances*). Issued annually. It contains a description of national government loans.

4. *The Corporation Manual* (formerly *Poor's Manual*). This has been the standard reference book for over half a century. It is issued annually and contains in addition to financial and operating statistics of individual railroads and other corporations, descriptions of all security issues. It is an indispensable work to the student, statistician, bond salesman, and investor.

5. *Moody's Analyses of Investments*. The first issue of this publication concerning railroads was in 1909. It has been put out annually since then and now comprises separate volumes: (1) Government and Municipalities, (2) Railroads, (3) Public Utilities, and (4) Industrials. The plan followed is somewhat different from that of *Poor's Manual*, but the purpose of the two publications is essentially identical. The introductory section of *Moody's Analyses* contains a short essay on the study of investments which will be found very helpful to students and others intending to use the work. In addition the volume contains a "key to bond and stock ratings" similar to the credit rating method of the mercantile agencies, such as Bradstreet's and Dun's.

6. *Railroad and Industrial Supplement of the Commercial and Financial Chronicle*. Issued twice a year on the last Saturday of May and November.

The Public Utility Section of the Commercial and Financial Chronicle. Issued twice a year on the last Saturday of April and October.

These are of considerable value to the student, as they contain in condensed form information regarding the dates of bond issues, amounts authorized and outstanding, interest periods, due dates, brief history and descriptions of the properties, etc. The publications are regularly furnished to subscribers of the *Commercial and Financial Chronicle*.

7. *Fitch Bond Book*. Issued annually by Fitch Publishing Company, New York. It contains data in condensed form of practically all important corporation bond issues.

8. *White and Kemble's Atlas and Digest of Railroad Mortgages*. This is an elaborate compilation, and is rather too expensive for most students. The leading investment and banking houses, however, generally maintain complete sets. The maps are issued and replaced from time to time in order to adapt them to changes and additions of the mortgages, liens, and other financial development of the individual railroad systems.

9. *Standard Statistics Card Service*. Contains on cards much of the information found in the manuals and bond books.

10. Among government statistical publications helpful to investors are those issued by the following bodies:

(a) *Bureau of the Census, Department of Commerce*. Two volumes which are issued annually and can be readily obtained directly from the Census Bureau or from the Superintendent of Public Documents are:

Financial Statistics of States.

Financial Statistics of Cities having a population of over 30,000.

(b) *Interstate Commerce Commission*. Annual reports on the statistics of railroads in the United States. The statistics comprise mainly the mileage, traffic data, and financial statements relating to individual railroad corporations. They are accordingly different in many cases from the returns contained in the annual reports to stockholders. All the railroad companies are required to submit annual reports on prescribed forms to the Interstate Commerce Commission.

(c) *Bureau of Foreign and Domestic Commerce, Washington, D. C.* Publishes special reports on financial and trade conditions, at home and abroad. Also a weekly called "Commerce Reports."

(d) *Public Service Commission of New York (First District and Second District)*. Contains statistics relating to railroads and public utilities operating in New York State, similar to data published by the Interstate Commerce Commission.

(e) *U. S. Treasury Department*. Publishes reports of condition of the national finances, the Federal reserve banks and the Federal farm loan banks.

(f) *The Federal Trade Commission*. Publishes special reports on various industries.

Textbooks and Treatises.—There are innumerable textbooks on all phases of financial and investment problems, many of which have very little direct interest to the student. The works which are most useful to bond students and investors are listed in the bibliographies following each chapter.

Periodicals.—Of these, the most valuable to students of bond investment are:

1. *The Commercial and Financial Chronicle*. Issued weekly. Contains news items and digests of reports of the railroad companies. A monthly supplement, the Railroad Earnings Section, furnishes statements of monthly earnings and operating expenses as reported by the companies to the Interstate Commerce Commission.

2. *The Daily Bond Buyer, New York*. Issued daily, with weekly and annual supplements. Publishes data regarding municipal bonds in the United States. It is very useful because of its complete record of municipal bond sales.

3. *The Financial World, New York*. Issued weekly.

4. *The Magazine of Wall Street, New York*. Issued twice a month.

5. *The United States Investor, Boston.* Issued weekly.
6. *The Railway Age, New York.* Issued weekly
7. *The Electric Railway Journal, New York.* Issued weekly.
8. *The Electrical World, New York.* Issued weekly.
9. *Public Utility Reports, Rochester, N. Y.* Issued fortnightly. Contains decisions of the public utility commissions and of state and federal courts.
10. The leading daily papers of the large cities have financial sections which contain data and information on investment topics.

APPENDIX B

LISTING REQUIREMENTS OF THE NEW YORK STOCK EXCHANGE

Page 1

COMMITTEE ON STOCK LIST NEW YORK STOCK EXCHANGE

July 1, 1924

The Committee will meet Mondays at 3:15 p.m.

An application, *conforming to these requirements*, signed by an executive officer of the applying corporation, voting trustees, or depositary committees, and nine printed or typewritten copies must be filed with the Secretary of the Exchange at least five days prior to date set for consideration.

Applications must be accompanied by the required papers and agreements, and by a check for one hundred dollars for each \$1,000,000 or portion thereof, of each class of security (including stock of the par value of \$100 per share) or where stock of a par value of less than \$100 per share check for one hundred dollars for each 10,000 shares or portion thereof or where stock without nominal or par value check for one hundred dollars for each 10,000 shares or portion thereof; checks to be drawn to the order of "Treasurer, New York Stock Exchange." In addition, companies making application are required to pay cost of printing. Printers' bills will be submitted directly to the applicant.

An application for listing Governmental, State, County or Municipal securities must be signed by a properly accredited official or by financial representatives, and be accompanied by required check as above and required papers.

Specimen applications furnished on request.

THE EMPLOYEES OF THE COMMITTEE ON STOCK LIST ARE INSTRUCTED TO ASSIST IN THE PREPARATION OF APPLICATIONS TO LIST WHENEVER SO REQUESTED. NO CHARGE WILL BE MADE FOR SUCH SERVICE.

REQUIREMENTS FOR ORIGINAL LISTING STOCK

For form of certificates eligible to be listed under this classification, and list of papers to be furnished, see pages 4, 5, 6, 7 and 8.

Every application for an original listing of capital stock shall recite:

A Where incorporated.

B (1) Amount applied for (whether temporary or permanent certificates); (2) authorized issue.

C (1) Date of charter; (2) duration.

D (1) Business; (2) special rights or privileges under charter or by-laws.

E (1) Whether capital stock is full paid; (2) non-assessable; and (3) whether liability attaches to shareholders.

F (1) Issues (by classes), dividend rate and par value; (2) total amount of each, authorized and issued; (3) increases and authority therefor, including (a) action by stockholders, (b) by directors and (c) by public authorities, etc.; (4) amount unissued, (a) options or contracts on same, (b) specific reservation for conversion.

G If preferred stock; (1) whether cumulative or non-cumulative; (2) preferences, including (a) voting power; (b) dividends; (c) distribution of assets on dissolution or merger; (d) redemption; (e) convertibility; (f) special provisions.

H Voting power of obligations of debt.

I (1) Purpose of issue; (2) application of proceeds; (3) amount issued for securities, contracts, property; description and disposition; (4) additional property to be acquired, with particulars, as required by paragraph *N*.

J (1) History of corporation; (2) of predecessor companies or firms, with location and stock issues (by classes); (b) conditions leading to new organization.

K Tabulated list of constituent, subsidiary, owned or controlled companies showing (a) date of organization; (b) where incorporated; (c) duration of charter; (d) business and (e) capital stock issues (by classes), par value, amount authorized, issued, owned by parent company.

L (1) Mortgage, and (2) other indebtedness showing, (a) date, (b) maturity, (c) interest rate, (d) convertibility, (e) redemption by sinking fund or otherwise, (f) amount authorized, and (g) amount issued; (3) similar information regarding mortgage and other indebtedness of constituent, subsidiary, owned, or controlled companies.

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M Other liabilities, joint and several, (1) guaranties, (2) leases, (3) traffic agreements, (4) trackage agreements, (5) rentals, (6) car trusts, etc., (7) terms of each, and provision for payment; (8) similar description of other agreements or easements; (9) similar information as to constituent, subsidiary, owned or controlled companies.

N (1) Description, location, nature and acreage of property, (a) owned in fee; (b) controlled; (c) leased; (2) railroads, mileage completed, operated and contemplated; (3) equipment; (4) character of buildings and construction; (5) tabulated list of franchises showing (a) where granted,

(b) date, (c) duration, (d) purpose; (6) timber, fuel or mining lands, water rights; (7) similar information as to constituent, subsidiary, owned or controlled companies.

O Policy as to depreciation.

P (1) Character and amount of annual output for preceding five years; (2) estimated output (character and amount) for current year; (3) number of employees.

Q (1) Dividends paid or declared; (2) by predecessor, and constituent, subsidiary, owned or controlled companies.

R Financial statements; (1) earnings for preceding five years, if available with interest charges, depreciation and federal taxes; (2) income and surplus account of recent date for at least two years, if available; (3) balance sheets of same dates; (4) balance sheet giving effect to recent financing, if any; (5) similar accountings for predecessor, constituent, subsidiary, owned or controlled companies; (6) corporations consolidated within one year previous to date of application, income and surplus account and balance sheet of all companies merged and balance sheet of applying corporation; (7) if in hands of receiver within one year previous to date of application, (a) income account and balance sheet of receiver at time of discharge, and (b) balance sheet at close of receivership.

S Agreements contained on pages 5 and 6.

T Fiscal year.

U Place and date of annual meeting.

V Location of principal and other offices.

W Names of (1) directors, classified, with addresses; (2) officers; (3) transfer agents, with addresses; (4) registrars, with addresses.

In addition to the above, applications from corporations which own or operate mines must recite:

A Patented and unpatented claims, by numbers.

B (1) Geological description of country; (2) location and description of mineral and other lands; (3) ore bodies; (4) average value of ore; (5) character and analysis; and (6) methods of treatment.

C History of workings, (1) results obtained; (2) production each year.

D (1) Ore reserves compared with previous years showing separately as to character and metal content; (2) estimate of engineer as to probable life of mines; (3) probabilities by further exploration.

E (1) Provisions for smelting and concentration; (2) proximity of property to railway or other common carrier.

F Properties in process of development; income account if available; guarantees for working capital and for completion of development in event income account not available.

G Total expenditures for preceding five years for acquisition of new property, development, proportion charged to operations each year.

H (1) Policy as to depletion; (2) acquisition of new property; (3) new construction and development.

I Production by tons, number of tons of ore treated, average assay

yield, percentage of extraction, recovery per ton of ore, for preceding five years, if available.

In addition to the above, applications from corporations which own or operate oil and gas wells must recite:

A (1) Brief history of oil field; (2) geological description of country; (3) character and gravity of oil.

B (1) Total area of oil land (developed and undeveloped). (a) owned, (b) leased, (c) controlled, (d) proven, (e) under exploitation, (f) royalties.

C (1) Number of wells (oil or gas) on each property, (a) in operation, (b) drilling, (c) contemplated, (2) average depth of wells drilled, (a) shallowest, (b) deepest, (c) probable life; (3) whether oil sands are dipping.

D (1) Gross daily production—initial and present; (2) annual gross production from each property for preceding five years, if available; (3) estimated gross production for current year.

E (1) Storage, capacity and location; (2) (a) amount of oil stored, (b) character, (c) value, (3) pipe line, (a) gauge, (b) capacity, (c) mileage.

F (1) Refineries, (a) capacity, (b) acreage, (c) employees, (d) products and by-products.

G Properties in process of development; income account if available; guaranties for working capital and completion of development in event income account not available.

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H Total expenditures for preceding five years for acquisition of new property, well drilling and development, proportion charged to operations each year.

I (1) Policy as to depletion; (2) acquisition; and (3) development of new properties.

(Note: For requirements as to voting trust or stock trust certificates, or certificates of deposit, see page 4.)

BONDS

For form of securities eligible to be listed under this classification, and for list of papers to be furnished, see pages 4, 5, 6, 7, and 8.

An application for an original listing of bonds shall recite all information required for listing stock, and

A (1) Full title; (2) amount applied for (whether temporary or permanent), denominations and numbers; (3) amount authorized and outstanding, authority therefor, including (a) action by stockholders, (b) directors, and (c) public authorities, etc.; (4) whether bonds are coupon (registerable as to principal) or registered, interchangeable or exchangeable; (5) exchangeability or convertibility into other securities, and terms.

B Names and addresses of trustees.

C (1) Date of issue and maturity; (2) interest rate; (3) places at, and dates for payment of interest and principal; (4) where registerable or

transferable; (5) kind and standard of money, and options; (6) tax exemption; (7) whether redeemable or purchasable in whole or part by sinking fund or otherwise, showing (a) dates, (b) price, (c) duration and place of published notice; (8) specified reservation of stock for conversion.

D Provisions for declaration of principal due and payable in event of default of payment of interest, or other defaults, and waiver; percentage of outstanding bonds controlling trustee.

E Purpose of issue and application of proceeds, similar to that called for by Paragraph *I* of the Requirements for Listing Stock; provisions as to additional issue.

F Disposition of bonds refunded, redeemed or purchased for sinking fund, and mortgage securing same.

G Mortgage or indenture provisions for (1) serial issues; (2) values in United States gold coin; (3) issuance in foreign languages and (4) that the English version governs; (5) terms of exchangeability of bonds payable in foreign places for bonds payable in United States or vice versa.

H (1) Security—Mortgage, indenture of trust, or other agreement; and (2) liens; (a) properties covered, (b) mileage of railway lines, (c) buildings, (d) equipment, (e) securities, (f) rights, (g) privileges, (h) titles, (i) franchises, (j) leases, etc.; (3) other liens covering same or any part of same properties, (4) guaranty and terms.

I Unusual provisions or covenants contained in mortgage, or deed of trust.

REQUIREMENTS FOR LISTING OF ADDITIONAL AMOUNTS

For list of papers to be furnished, see pages 4 and 5.

Refer to previous to applications and last application by number and date, and recite:

A Where incorporated.

B (1) Amount applied for; (2) amounts authorized and outstanding; (3) authority for issue, including (a) action by stockholders, (b) by directors, and (c) by public authorities, etc., (4) total amount applied for.

C (1) Purposes of issue; (2) application of proceeds; (3) amount, description and disposition of securities exchanged for new issues; (4) additional property acquired or to be acquired, with particulars as required by paragraph *N* of the Requirements for Listing Stock.

D (1) Dividends paid and declared; also by constituent, subsidiary, owned or controlled companies; since previous application.

E Changes, if any, in (1) charter, (2) by-laws, or (3) capitalization since previous application.

F Changes in property, if any, since previous application.

G (1) Character and amount of output since previous application or earnings as in application for original listing; (2) estimated output (character and amount) for current year; (3) number of employees.

H Income account, surplus account and balance sheet of recent date, also for constituent, subsidiary, owned or controlled companies, or a consolidated income account, consolidated surplus account and a consolidated balance sheet.

I Policy as to depreciation and depletion.

J Fiscal year, place and date of annual meeting, location of offices, and names of officials as covered by Paragraphs *T*, *U*, *V*, and *W* on page 2.

(Note: "When a corporation purposes to increase its authorized capital stock, thirty days' notice of such proposed increase must be officially given to the Exchange before such increase may be admitted to dealings.")

(Note: "When the capital stock of a corporation is increased through conversion of convertible bonds already listed, the issuing corporation shall give immediate notice to the Exchange and the Committee on Stock List may, thereupon, authorize the registration of such shares and add them to the list.")

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REQUIREMENTS FOR LISTING OF CERTIFICATES OF DEPOSIT, VOTING TRUST OR STOCK TRUST CERTIFICATES, ETC.

For form of certificates eligible to be listed under this classification, and for list of papers to be furnished, see pages 4, 5, 6, 7 and 8.

Every application for the listing of certificates of deposit, voting trust or stock trust certificates, etc., shall recite:

A (1) Name of applicant; (2) amount applied for (whether temporary or permanent certificates); (3) depositary; (4) security deposited, and whether listed; (5) registrar.

B (1) Date of agreement; (2) names of committee, or voting trustees; (3) terms of trust; (4) powers and duties of committee, trustees, or depositary.

C Reasons for deposit.

D (1) Duration of trust or deposit; (2) extensions or limitations; (3) final date of deposits; (4) provision for deposits without penalty for approximately thirty days after listing, or if no time limit for deposit of securities without penalty is fixed, an agreement that approximately thirty days' notice of such limitation of time shall be published and given to the Stock Exchange; (5) date of presentation of plan; (6) provisions for dissent and withdrawal; (7) percentage necessary to adoption; (8) pro rata charges; (9) provisions for return of securities (or equivalent); (10) provision for payment of interest, dividends, etc.

E Applications to list Voting Trust or Stock Trust Certificates to recite financial statements of company as in paragraph *R* on page 2.

F Agreement to deliver definite securities at termination of Voting Trust or Voting Trust to be extended.

G Agreement to have definitive securities listed.

H Agreement by Voting Trustees to have company publish its financial statements.

I Agreements contained on pages 5 and 6.

(Note: Applications to list voting trust or stock trust certificates and certificates of deposit for securities not a delivery on the Stock Exchange, must, in addition, comply with the Requirements.)

Applications for each class of deposited securities shall be separate and certificates issued of distinctive colors.

PAPERS TO BE FILED WITH APPLICATIONS

In addition to application for listing, the following papers must be filed:

For Stocks:

1 Three copies of charter, with amendments to date, one copy attested by proper public authority.

2 Three copies of by-laws, with amendments to date, one copy attested by an executive officer of corporation.

3 Three copies of leases, franchises, easements and special agreements, one copy of each attested by an executive officer of corporation.

4 One copy of resolutions of stockholders and directors and copy of proper public authority authorizing issue, each attested by an executive officer of corporation.

5 One copy of resolutions of stockholders or directors, and copy of proper public authority, authorizing issue of stock on conversion of other securities, attested by an executive officer of corporation.

6 One copy of resolutions of stockholders or directors directing specific reservation of authorized stock for conversion, attested by an executive officer of corporation.

7 One copy of resolutions of stockholders, board of directors, or executive committee attested by an executive officer of corporation, authorizing, by name, official to appear for listing securities (form may be had on application).

8 Opinion of counsel (not an officer or director of the corporation) as to legality of (a) organization, (b) authorization, (c) issue, and (d) validity of securities. *The Committee will not accept the opinion of an officer or director of an applying corporation nor of a firm in which the officer or director is a member, as counsel on any legal question affecting the corporation; nor will it accept the opinion of an officer or director of a guarantor corporation nor of a firm in which the officer or director is a member, on any legal question affecting the issuance of guaranteed securities.*

9 Six copies of detailed distribution of securities, one certified (form may be had on application).

10 One copy of resolution appointing transfer agent and registrar, attested by an executive officer of corporation.

11 Certificate of registrar of amount of securities registered at date of application.

12 Report of qualified engineer covering actual physical condition of property at recent date.

13 Map of property and contemplated extensions.

14 Specimens of all securities to be listed.

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15 Questionnaire (form may be had on application).

16 Certified copy of income account, surplus account and balance sheet contained in application.

17 Agreements.

For Bonds:

18 All papers required for listing stocks and also ten copies of the mortgage or indenture, one copy (a) certified to by trustee, (b) with copies of all certificates of proper recording.

19 Trustees' certificate required on page 6.

20 One copy of resolutions of stockholders or directors, and copy of proper public authority, authorizing issue of stock on conversion of bonds, attested by an executive officer of corporation.

21 One copy of resolution of stockholders or directors directing specific reservation of authorized stock for conversion, attested by an executive officer of corporation.

22 Certificate of disposition of securities redeemed or refunded.

23 Certificate as to collateral deposited.

24 Certified copy of release or satisfaction of underlying mortgages.

For securities of Reorganized Corporations:

1 All papers required for listing stocks and bonds. *Opinion of counsel shall state that proceedings have been in conformity with legal requirements, that title to property is vested in new corporation and is free and clear from all liens and incumbrances, except as distinctly specified; and also as to equities of securities of predecessor corporation.*

2 Certified order of court confirming sale on foreclosure or other authority for reorganization.

3 Certified copy of plan of reorganization.

4 Certified income and surplus account and balance sheet at close of receivership, if available.

5 Certified balance sheet at date of reorganization.

For additional amounts:

1 Nos. 4, 5, 6, 7, 8, 9, 11, 15, 16, 17 of papers required for original listings.

2 Nos. 1, 2, 3, 10, 12, 14 of said papers for stock, if any changes have occurred therein since previous application.

3 Nos. 1, 2, 3, 12, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24 of said papers for bonds, if any changes have occurred therein since previous application.

4 Certified copy of proper public authority for increase.

For Certificates of Deposit, Voting Trust, etc.:

1 Papers required for listing stocks and bonds.

2 Certified copies of any legal proceedings and court orders.

3 Three copies of deposit or trust agreement, one certified to by proper authority.

4 Three copies of circulars, issued by trustees or committee, one certified to by proper authority.

5 Certificates of amounts deposited.

AGREEMENTS

To be made part of applications where applicable:

1 Not to dispose of an integral asset or its stock interest in any constituent, subsidiary, owned or controlled company, or allow any of said constituent, subsidiary, owned or controlled companies to dispose of an integral

asset or stock interest in other companies, unless for retirement and cancellation, without notice to the Stock Exchange.

2 To publish once in each year and submit to the stockholders, at least fifteen days in advance of the annual meeting of the corporation, a statement of its financial condition, a consolidated income account covering the previous fiscal year and a consolidated balance sheet showing assets and liabilities at the end of the year; or an income account and balance sheet of the parent company and of all constituent, subsidiary, owned or controlled companies.

3 To maintain, in accordance with the rules of the Stock Exchange, a transfer office or agency in the Borough of Manhattan, City of New York, where all listed securities shall be directly transferable, and the principal of all listed securities with interest or dividends thereon shall be payable; also a registry office in the Borough of Manhattan, City of New York, other than its transfer office or agency in said city, where all listed securities shall be registered.

4 To notify the Stock Exchange thirty days in advance of the effective date of any change in the authorized amounts of listed securities.

5 Not to make any change in listed securities, of a transfer agency or of a registrar of its stock, or of a trustee of its bonds or other securities, without the approval of the Committee on Stock List, and not to select as a trustee an officer or director of the company.

6 To notify the Stock Exchange in the event of the issuance or creation in any form or manner of any rights to subscribe to or to be allotted, its securities, or of any other rights or benefits pertaining to ownership in its securities, so as to afford the holders of its securities a proper period within

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which to record their interests, and that all rights to subscribe or to receive allotments and all other such rights and benefits shall be transferable; and shall be transferable, payable and deliverable in the Borough of Manhattan, City of New York.

7 To notify the Stock Exchange of the issuance of additional amounts of listed securities, and make immediate application for the listing thereof.

8 To publish promptly to holders of bonds and stocks any action in respect to interest on bonds, dividends on shares, or allotment of rights for subscription to securities, notices thereof to be sent to the Stock Exchange, and to give to the Stock Exchange at least ten days' notice in advance of the closing of the transfer books or extensions, or the taking of a record of holders for any purpose.

9 To redeem Preferred Stock in accordance with the requirements.

10 To notify the Stock Exchange if deposited collateral is changed or removed.

11 To have on hand at all times a sufficient supply of certificates to meet the demands for transfer.

The Committee recommends a date be fixed as record for dividends, allotment of rights and stockholders' meetings, without closing the transfer books.

Notice of rights, allotments, subscription privileges, to bondholders and shareholders, should be as of a date after authorization.

TRUSTEES OF MORTGAGES

The Committee recommends that a trust company or other financial corporation be appointed trustee of mortgages, indentures, and deeds of trust; and when a State law requires the appointment of an individual as trustee, a trust company or other financial corporation be appointed as co-trustee.

Each mortgage, indenture, or deed of trust should be represented by a separate trustee.

The Committee will not accept as trustee:

(a) An officer or director of the issuing corporation;

(b) A corporation in which an officer of the issuing corporation is an executive officer.

The trustee shall present a certificate accepting the trust and certifying (1) securities are issued under the terms of the mortgage or indenture, giving the numbers, denominations and amount certified; (2) collateral deposited; (3) disposition of prior obligations. For additional issues of bonds, the trustee must certify that (1) increase is in conformity with terms of mortgage or indenture; (2) additional collateral deposited; and (4) disposition of prior obligations.

The company and trustee shall notify the Stock Exchange of the holding, cancellation, or retirement of securities, by redemption, through the operation of sinking fund or otherwise.

The trustee must notify the Stock Exchange if deposited collateral is changed or removed, and furnish a list of collateral substituted.

A change of trustee shall not be made without the approval of the Committee.

TRANSFER AND REGISTRY

Every corporation whose securities are listed upon the Stock Exchange must, in accordance with the rules of the Exchange, maintain (a) a transfer office and (b) a registry office, both in the Borough of Manhattan, City of New York. The transfer agency and registrar *shall not be identical*, and both must be acceptable to the Committee. A company cannot act as registrar of its own stock.

Where a stock is transferred at the company's office, the transfer agent or transfer clerk shall be appointed by specific authority of the board of directors to *countersign* certificates, in said capacity, and shall be other than an officer who is authorized to sign certificates of stock.

The entire amount of the capital stock of a corporation listed upon the Stock Exchange *must be directly transferable* at the transfer office of the corporation in the Borough of Manhattan, City of New York. When a corporation makes transfer of its shares in other cities, certificates shall be interchangeably transferable, and *identical in color and form*, except as to names of transfer agent and registrar; and the combined amounts of stocks registered in all cities shall not exceed the amount authorized to be listed.

Interchangeable certificates must bear a legend reciting the right of transfer in New York and other cities.

The registrar must file with the Secretary of the Stock Exchange an

agreement to comply with the requirements in regard to registration and *not to register any listed stock, or any increase thereof, until authorized by the Committee.*

Certifications of transfer and registry must be dated and signed by an authorized officer of the transfer agent and registrar, respectively.

A change in the form of a security, of a transfer agency, or of a registrar, shall not be made without the approval of the Committee.

FORMS OF CERTIFICATES, ENGRAVING, ETC.

General Requirements

(See Specific Requirements below.)

All securities for which listing upon the Exchange is requested, except as otherwise herein stated must be engraved and printed in a manner satisfactory to the Committee from at least two steel plates by an engraving

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company whose work the Committee is authorized by the Governing Committee to pass upon; the name of the engraving company must appear upon the face of all securities and also upon the face of coupons and the title panel of each bond. Securities must bear a vignette upon their face.

Said plates shall be: (1) *A border and tint plate* from which should be made a printing in color underlying important portions of the face printing; (2) *A face plate* containing the vignettes and descriptive or promissory portion of the document, which should be printed in black or in black mixed with a color. The combined effect of the impression from these plates must be as effectual security as possible against counterfeiting.

The printing of securities must be in distinctive colors, to make classes and denominations readily distinguishable.

All certificates, except as otherwise stated herein, must provide for transfer and for registration with dates. When a corporation makes transfers of its shares in other cities, certificates shall be identical in color and form, except as to names of transfer agent and registrar; certificates interchangeably transferable must bear a legend reciting the right of transfer in New York and other cities.

The Committee recommends that the text of securities shall provide for transfer in person or by duly authorized attorney upon surrender of the security properly endorsed.

A change in the form of a security, transfer agency, registrar, or trustee of bonds, shall not be made without the approval of the Committee.

The Committee will object to any security upon which an impress is made by a hand stamp, except for a date or power of substitution.

Bonds

(In addition to the General Requirements above outlined, the following apply specifically to bonds.)

All bonds must be fully engraved and printed in a manner satisfactory to the Committee; face of bonds and coupons must bear a vignette.

The text of bonds should recite conditions of issuance, tax exemption, terms of redemption (by sinking fund or otherwise), convertibility, default,

interchangeability or exchangeability of coupon and registered bonds, and conversion into other securities.

Bonds, in the text and on the reverse, must recite payment of principal and interest in the Borough of Manhattan, City of New York, and provide for transfer and registration. Coupons must recite payment of interest in the Borough of Manhattan, City of New York and tax exemption.

Registered bonds must carry a power of assignment in such form as the Committee may approve.

The Committee recommends that registered bonds be made interchangeable with coupon bonds.

Registered bonds interchangeable with coupon bonds shall bear a legend reciting numbers and denominations of coupon bonds, against which they are issued.

If coupon bonds of any denomination are interchangeable with coupon bonds of other denominations they shall contain such recital in the text and bear an appropriate legend on the reverse.

Registered bonds made such by detaching coupon sheets are not eligible for listing.

Forms of Legends for Bonds:

For coupon bonds of one denomination interchangeable with coupon bonds of other denominations:

"As provided in the Indenture, coupon bonds of the denominations of \$1,000, \$500 or \$100, at any time outstanding, when surrendered with all unmatured coupons attached and upon the payment of charges, may be exchanged for an equal aggregate principal amount of coupon bonds of any other denomination of the same issue, of numbers not contemporaneously outstanding, with all unmatured coupons attached."

For a coupon bond of a thousand dollars exchangeable for coupon bonds of smaller denominations:

"The holder of this bond may, at his option, on surrender and cancellation and on payment of charges, as provided in the indenture, receive in exchange coupon bonds of this issue for an amount aggregating \$1,000 in denominations of \$. of numbers not contemporaneously outstanding."

For coupon bonds of smaller denominations exchangeable for a \$500 or a \$1,000 coupon bond:

"The holder of this bond may at his option, on surrender and cancellation of this bond and others of the same issue aggregating \$500 or \$1,000 and on payment of charges, as provided in the indenture, receive in exchange a coupon bond of this issue of a number not contemporaneously outstanding, for the amount aggregated."

For registered bond(s) issued for coupon bond(s) of denomination(s) of less than \$1,000:

"This bond is issued in exchange for coupon bond(s) of this issue numbered. in denominations of \$."

not contemporaneously outstanding, aggregating the face value hereof and coupon bond(s) of this issue bearing the said number(s) and of

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the same denomination(s) will be issued in exchange for this bond upon surrender, cancellation and payment of charges provided in the indenture."

For registered bond(s) issued for \$1,000 coupon bond(s):

"This bond is issued in exchange for coupon bond(s) of this issue numbered.....for \$1,000 (each), not contemporaneously outstanding, and coupon bond(s) of this issue bearing the said number(s) will be issued in exchange for this bond upon surrender, cancellation and payment of charges provided in the indenture."

Stock

(In addition to the above General Requirements, the following apply specifically to stock certificates.)

The border and tint plate for one-hundred share certificates of stock shall have *said denomination engraved thereon in words and figures; the plates for smaller amounts shall bear some engraved device whereby the exact denomination of the certificate may be distinctly designated by perforation; also conspicuously upon the face "Certificate for less than one hundred shares."*

Certificates for every class of stock shall recite preferences of all classes.

Certificates of stock shall recite (1) ownership; (2) par value; (3) whether shares are *full* paid and (4) non-assessable; (5) preference as to dividends; (6) distribution of assets upon dissolution or merger; (7) terms of redemption; (8) convertibility; (9) voting power, or (10) other privilege; and (11) must bear the following legend:

This certificate is not valid until countersigned by the transfer agent and registered by the registrar.

The following form is required upon the reverse of a certificate of stock:

For value received.....hereby sell, assign and transfer unto.....

..... shares
of the *capital stock represented by the within certificate
and do hereby irrevocably constitute and appoint

..... attorney
to transfer the said stock on the books of the within named
company with full power of substitution in the premises.

Dated.....19.....

In presence of

Notice: The signature to this assignment must correspond with the name as written upon the face of the certificate in every particular without alteration or enlargement, or any change whatever.

*On certificates without nominal or par value the word "capital" may be omitted.

Certificates of Deposit, Voting Trust Certificates, etc.

In addition to the General Requirements above outlined, certificates of

deposit and voting trust certificates must conform in every particular to the Specific Requirements as to stock certificates, except that the descriptive portion of a certificate of deposit may be typed satisfactorily to the Committee.

Temporary Certificates or Receipts

Temporary certificates or receipts must conform to the General Requirements above outlined and to the Specific Requirements as to stock certificates, except that the text may be typed satisfactorily to the Committee, and need not bear a vignette.

REMOVALS OR SUSPENSIONS IN DEALINGS OF LISTED SECURITIES

Whenever it shall appear that the outstanding amount of any security listed upon the Stock Exchange has become so reduced as to make inadvisable further dealings therein, the Committee may direct that such security be removed from the list and further dealings therein prohibited.

"The Governing Committee may suspend dealings in the securities of any corporation previously admitted to quotation upon the Exchange, or it may summarily remove any securities from the list."

E. V. D. Cox, Secretary.

ROBERT GIBSON, Chairman.

COMMITTEE ON STOCK LIST

NEW YORK STOCK EXCHANGE

February 2, 1925.

FOREIGN GOVERNMENT BONDS

Data required in addition to Regular Requirements in connection with proposed Listings

- 1 (a) Statement of debt, internal and external, and currency in which it is to be paid; statement of external debt to be computed in dollars.
- (b) Contingent and actual liabilities, and priority.
- (c) Revenue or assets pledged, if any, under present and other loans, and nature of administration.
- (d) Summary of such revenue receipts and income from such assets for preceding five years, stated in dollars, if available.
- (e) Status of the law under which said revenue or assets are pledged.
- 2 Past debt record with respect to:
 - (a) Defaults;
 - (b) Scaling down interest payments;
 - (c) Suspending sinking fund payments.
- 3 Where listed.
- 4 Currency in which interest and principal are to be paid.
- 5 Tax liability and exemption.

- 6 Statement of governmental income and expenditure for whatever account in the preceding five years.
- 7 Statement of the sums required, in dollars, to meet foreign interest charges in each of the five preceding years.
- 8 Statement in terms of weight and dollars (converted) of merchandise imports and exports in each of the preceding five years.
- 9 Statement of covenants, if any, with respect to payment of principal and interest of bonds dependent upon state of Peace or War and nationality of holder.

APPENDIX C

ANALYSIS OF STATE LAWS WITH REFERENCE TO INVESTMENT BY SAVINGS BANKS IN RAILROAD SECURITIES ¹

STATE	CLASSES OF RAILROAD BONDS	MINIMUM EARNING REQUIREMENTS	MINIMUM DIVIDEND REQUIREMENTS	MINIMUM CAPITAL STOCK REQUIREMENTS
CALIFORNIA ²	First Mortgage Refunding Mortgage, and Underlying or Divisional Closed Mortgage Bonds of railroads incorporated in California and operating exclusively therein. The refunding bonds must provide for retirement of all underlying liens.	1½ times interest on all outstanding mortgage debt for at least 1 year preceding the issuance of the bonds.	Not stated.	Not stated.
COLORADO	First Mortgage Bonds of steam and street railroads.	Not stated.	4% for 5 years.	Not stated.
	Bonds (issued or guaranteed) of New England and New York railroads having 300 miles of line.	Not stated.	4% per annum for 5 years previous to the year of investment.	One-third of authorized funded debt (excluding bonds reserved to retire prior liens, but including guaranteed issues of other companies).
CONNECTICUT	Bonds or Debentures secured by a mortgage or having a prior equity covering 75% of the roads of railroads having 500 miles of line incorporated in one of the New England States and with at least one-half of the road located within said state. A refunding mortgage must provide for retirement of prior liens.	Not stated.	4% per annum for 5 years previous to the year of investment.	One-third of authorized funded debt (excluding bonds reserved to retire prior liens, but including guaranteed issues of other companies).

¹ Original appears in *Railroad Securities—a Course of Study*.

² In addition to the class of securities mentioned here, California savings banks may invest in railroad securities that are legal for purchase in New York and Massachusetts.

STATE	CLASSES OF RAILROAD BONDS	MINIMUM EARNING REQUIREMENTS	MINIMUM DIVIDEND REQUIREMENTS	MINIMUM CAPITAL STOCK REQUIREMENTS
CONNECTICUT (Continued)	First Mortgage Bonds covering 75% of the road owned in fee of a railroad in the United States having (during 5 years prior to investment) 500 miles of line or more.	Annual gross earnings must be not less than \$10,000,000 (for 5 years) if road is less than 500 miles. Such gross earnings must be five times interest and rental charges.	4% per annum for 5 years previous to the year of investment.	
	Equipment Trust Notes.	Annual gross earnings must be not less than \$10,000,000 (for 5 years) if road is less than 500 miles. Such gross earnings must be five times interest and rental charges.	4% per annum for 5 years previous to the year of investment.	
FLORIDA	First Mortgage bonds of railroads incorporated and operated in United States.	Not stated.	Not stated, but regular payments of dividends for two years required.	Not stated.
MAINE	Bonds of railroads of Maine over 500 miles.	Not stated.	Not stated.	Not stated.
	First Mortgage of railroads of 500 miles, when mortgage covers 75% mileage; Bonds issued to refund First Mortgage Bonds as above.	Gross operating revenues of \$10,000,000 and net earnings at least 1½ times interest for 5 years.		One-third of amount of total bonded indebtedness.
MASSACHUSETTS ³	Bonds and Notes of railroads incorporated in Massachusetts and whose lines are located wholly or partly therein.	Not stated.	4% per annum for 5 years next preceding investment.	Not stated.
	Equipment obligations issued under the "Philadelphia Plan" of railroads whose mortgage bonds are legal for investment.			
	Bonds issued to provide for retirement of 1st Mortgage of New England railroads. ⁴	Not stated.	It is provided that dividend payments for 1 year previous were equal at least one-third of interest payments.	Not stated.

³ Trust Funds may be invested in 1st Mortgage R. R. Bonds of New England R. R.'s that have paid regular dividends for two years prior to investments.

⁴ Includes debentures which constitute a prior lien, or are on an equal basis with prior lien obligations.

STATE	CLASSES OF RAILROAD BONDS	MINIMUM EARNING REQUIREMENTS	MINIMUM DIVIDEND REQUIREMENTS	MINIMUM CAPITAL STOCK REQUIREMENTS
MASSACHUSETTS (Continued)	1st or Refunding Mortgage Bonds, as above, issued or guaranteed by U. S. railroads having 500 miles and over. Mortgage must cover 75% of property.	\$15,000,000 gross earnings if less than 500 miles. Gross earnings to be at least 5 times fixed charges for 10 years.	One-third of interest charges. ⁵ 4% per annum for 10 years preceding investment. ⁵	One-third of net authorized Funded Debt. ⁵
MICHIGAN	1st Mortgage Bonds issued or guaranteed under lease by U. S. railroads.	Not stated.	4% annually for 5 years prior to investment.	Not stated.
	Bonds issued for Refunding 1st Mortgage Debt, and for improvements, etc., when approved by State Securities Commission.	Not stated.	4% annually for 3 years ⁶ prior to investment.	One-third of Bonded Debt.
MINNESOTA	1st Mortgage Bonds of railroads which have been secured by government land grant.	Not stated.		Not stated.
	1st Mortgage Bonds and Refunding Bonds issued to retire 1st Mortgage Bonds.		4% for 5 years prior to investment. ⁷	
MISSOURI	1st Mortgage Bonds of Railroads in selected Middle Western States, together with 1st Mortgage Bonds of the Central Pacific, Union Pacific, New York Central, West Shore, and Pennsylvania Railway Companies.	Operating Expenses and Fixed Charges for 3 years.	Not stated.	Not stated.
NEW HAMPSHIRE	Bonds and Notes of New Hampshire incorporated railroads.	Not stated.	None.	Not stated.
	Bonds issued or guaranteed by New England railroads.		Regular dividends for 2 years prior to investment.	One-third of Funded Debt.
	Bonds of other railroads.	Not stated.	4% dividends for 3 years.	
NEW JERSEY	Stocks and notes.	Not stated.	4% dividends for 5 years.	
	1st Mortgage Bonds.			
	Refunding Bonds issued to retire entire funded debt.	Not stated.	4% dividends for 5 years.	Not stated.

⁵ If railroad fails to meet these requirements during a period of more than two years after investment, its bonds are no longer legal for savings banks.

⁶ Dividends of 4% for 10 years prior to investment is the requirement in the case of Commercial Banks and Trust Companies.

⁷ This provision applies to Commercial Banks and Trust Companies.

STATE	CLASSES OF RAILROAD BONDS	MINIMUM EARNING REQUIREMENTS	MINIMUM DIVIDEND REQUIREMENTS	MINIMUM CAPITAL STOCK REQUIREMENTS
NEW YORK ⁸	1st Mortgage Bonds of New York railroads and of connecting and controlled railroads.	Not stated.	4% annually for 5 years previous to investment.	One-third of Mortgage Debt.
	Mortgage Bonds issued to retire prior liens issued or guaranteed by selected railroads and authorized prior to January 1, 1905.	Not stated	4% for 10 years previous to investment.	One-third of Bonded Debt.
	Mortgage and Refunding Bonds of U. S. railroads (covering not less than 75% of property) having a mileage of 500 miles. ⁹	Gross earnings (including coal sales) to be 5 times interest and rental charges.	4% for 5 years previous to investment.	One-third of authorized 1st Mortgage Bonds, together with Bonds that were issued to retire prior liens.
	Assumed and Guaranteed Bonds which are prior in lien to and to be refunded by general mortgage bonds which are legal under foregoing provisions.	Not stated.	Not stated.	Not stated.
NORTH DAKOTA	Mortgage Bonds of any railroad incorporated in the United States.	Not stated.	4% for 10 years.	Not stated.
OREGON	Mortgage Bonds of railroads incorporated in the United States of not less than 100 miles.	Income sufficient in last 3 years to cover fixed charges.	Not stated.	Not stated.
OHIO ¹⁰	Mortgage and Collateral Trust Bonds.	Not stated.	3% Dividends for 5 years. ¹⁰	
	Stocks which have paid dividends for 5 years.			
RHODE ISLAND	Mortgage and Debenture Bonds, Equipment Notes, and Guaranteed Stock of railroads of 100 miles or more.	Requires certain minimum income over a period of 3 years varying with each class of bond and in some cases equal to twice the interest charges.	None.	None.
	Stock of railroads whose Bonds are legal investments.	Same.	4% dividends for 10 years.	
TEXAS	1st Mortgage Bonds of railroads domiciled in Texas. ¹¹			

⁸ Not more than 25% of assets of Savings Bank to be invested in Railroad Bonds.

⁹ Mileage may be less than 500, if gross earnings are \$10,000,000 or more annually.

¹⁰ Applies also to Trust Companies and Commercial Bank investments.

¹¹ Applies also to State banks of deposit and discount.

STATE	CLASSES OF RAILROAD BONDS	MINIMUM EARNING REQUIREMENTS	MINIMUM DIVIDEND REQUIREMENTS	MINIMUM CAPITAL STOCK REQUIREMENTS
VERMONT	Bonds and Notes of Vermont incorporated railroads.	Not stated.	Not stated.	None
	1st Mortgage Bonds of New England incorporated railroads, at least one-half of whole mileage is in these states.	Not stated.	4% per annum for 5 years and dividends must equal one-third of bonded interest.	One-third of authorized 1st Mortgage indebtedness, excluding refunding mortgages for retirement of 1st Mortgage.
	Mortgage Bonds covering 75% of lines owned in fee of other railroads of 500 miles.	\$15,000,000 gross earnings, if less than 500 miles, and not less than five times interest and rental charges.	None.	None.
WISCONSIN	1st Mortgage Bonds or Consolidated Mortgage Bonds issued to retire entire bonded debt.	Not stated.	4% per annum for 5 years preceding investment.	None.
WASHINGTON	Mortgage Bonds of railroads incorporated in U. S. of 500 miles when mortgage covers 75% of line.	Gross earnings not less than five times interest charges.	4% per annum for 5 years.	One-third of the Bonded indebtedness.

APPENDIX D

PROBLEMS AND QUESTIONS

CHAPTER I—NATURE OF INVESTMENT

Problem

Joseph P. Harriman, at the age of 28 years, fell heir to a sum of \$500,000 the result of a distribution of a trust estate. He used the money for the following purposes:

- a. With \$100,000 he purchased a life annuity.
- b. With \$100,000 he acquired a partnership in a stock exchange brokerage concern, in which there were two other partners, each of whom contributed the same capital investment and had equal voice in the concern's affairs.

With \$150,000 he purchased securities consisting of well secured bonds of municipalities, railroads, and public utilities together with \$10,000 in United States Liberty bonds.

- d. With approximately \$50,000 he purchased 500 shares of Kansas City Southern Railway common stock, 500 shares of St. Louis Southwestern Railroad stock and 100 shares of American Agricultural Chemical stock. None of these shares furnished any income, nor did he purchase them to hold for income purposes. His friend and partner, a member of the New York Stock Exchange, had told him that the sentiment among fellow stock traders was "bullish," *i.e.*, that these traders thought stock prices were on the upward trend and that purchases of certain low-priced non-dividend paying railroad stocks would net handsome profits if purchased and held for a short time.
- e. With \$25,000 he purchased in December 20,000 bushels of wheat to be delivered the following May. He entered into this transaction because a customer of his firm informed him that the Argentine and Australian wheat crops would be very poor this season, and inasmuch as the yield of European wheat had been below the average, there would be a world-wide shortage and wheat prices would be higher in the spring.
- f. He advanced \$25,000 as a loan to a college friend to enable the latter to stock a ranch recently purchased in northern Wyoming. No security was demanded for this loan and no interest was charged for the accommodation. In fact, Harriman merely desired to have a boyhood friend share in his good fortune.

- g. With \$50,000, Harriman purchased and furnished a home in a suburban section. On the advice of his partners he assumed a mortgage of \$25,000 which was held against the property.
- . The remainder of his inheritance he deposited in various banks, but as a large part was drawn against to pay long standing bills and current expenses, his balances in each bank soon averaged less than \$1,000 and he was not credited with interest on his accounts.

Questions

1. Which of these transactions constituted an investment as defined in Chapter I?
2. Which constituted a speculation?
3. Which were neither investments nor speculations?
4. Give reasons for your answers.

CHAPTER II—THE DEVELOPMENT OF INVESTMENT

Questions

1. Mention some of the early forms of investment.
2. Why is a stable currency essential to modern investment?
3. Why have banks been an important factor in the development of modern investment?
4. Explain how the corporate form of business enterprise offered a popular field for modern investment.
5. What is the function of stock exchanges in relation to investment?
6. Who are investors?

CHAPTER III—CLASSES OF INVESTORS

Problem

John Smith is a partner in a department store in which he has placed \$500,000 of his fortune, estimated at \$1,000,000. The capital invested in the business enterprise is \$2,500,000, divided equally among five partners. Smith takes no active part in the administration of the business and unlike the other partners holds no office in the concern. In addition to his partnership in the department store, he owns 1,000 shares of a total of 2,100 shares of capital stock of a coal mining company of which he is a director, but not manager. He also owns the following property:

- \$50,000 U. S. Liberty Bonds
- \$25,000 Pennsylvania Railroad General mortgage $4\frac{1}{2}\%$ bonds, due 1965
- 250 shares United States Steel Corporation 7% preferred stock
- \$10,000 first mortgage on a residence building in Jersey City, New Jersey
- \$5,000 of 6% bonds of the A. B. University Club of New York City (of which he is a member)
- A co-operative apartment in New York City, for which he paid \$40,000
- A country home and farm on the North Shore of Long Island in which

he resides during the summer months, but which he occasionally leases to others.

Questions

1. Designate on the basis of the foregoing information in what respect Mr. Smith is a capitalist, an investor, or neither, stating in each case your reasons.
2. What class of individual investors designated on page 28 would you consider as least likely to purchase and hold speculative investments?

CHAPTER IV—FUNDAMENTAL PRINCIPLES

Questions

1. Explain why the "security of income" may be considered the primary and most fundamental of investment principles. Give illustrations.
2. Give some incidental principles and show their relation to the two fundamental principles, viz.: *Safety of income* and *Safety of principal*.
3. Explain what is meant by diversification of investments. How may this diversification be accomplished by small investors?
4. Explain the purpose and the functions of investment trusts. What are their limitations? Name some existing investment trusts.

CHAPTER V—SOME INCIDENTAL PRINCIPLES OF INVESTMENT

Problem—Diversification and Freedom from Care

The following is a statement of the investments on resources of the 147 savings banks in the State of New York as of January 1, 1925:

NEW YORK SAVINGS BANK INVESTMENT HOLDINGS

RESOURCES		Per Cent to Resources	
		Jan. 1, 1925	Jan. 1, 1924
Bonds and Mortgages	\$2,099,222,135.27	55.0	52.9
Stock and Bond Investments (Estimated Market Value)	1,452,654,832.42	38.2	40.6
Par Value			
United States	540,995,558.00	14.2	17.2
New York State	16,453,750.00	0.4	0.4
Bonds of other States	109,067,675.00	2.8	2.5
Bonds of cities, counties, villages, towns and school districts in this and other States	336,955,414.25	8.08	9.4
Railroad Mortgage bonds	479,660,115.90	12.6	12.9
Bonds of Land Bank of the State of New York	708,000.00	0.018	0.017
Federal Farm Loan bonds (first land bank district)	412,000.00	0.010	0.0005
Total par value of Stocks and Bonds	1,484,252,513.15		
Promissory Notes	8,842,418.52	0.2	0.59

Bankers Acceptances and bills of Exchange...	99,765.33	.002	0.088
Banking Houses and lots.....	39,199,485.16		
Other real estate	2,587,620.23		
Cash on deposit in banks and trust companies	134,361,543.76	3.5	3.0
Cash on hand	15,906,474.60	0.4	0.4
Total of collectible interest.....	42,845,635.72		
Other assets	1,360,617.32		
Total resources	3,797,080,528.33		

LIABILITIES

Amount due depositors.....	3,397,742,206.55
Other liabilities	2,661,690.52
Surplus on estimated market value of stocks and bonds	396,676,631.26
Total liabilities	3,797,080,528.33

Questions

1. Is there sufficient diversification to assure safety?
2. Would you suggest further diversification and the method of accomplishing it?
3. Does the various percentages of each class of investment on January 1, 1924, show greater diversification than 1925?
4. What class of investments require the least care and attention? Give reasons.

CHAPTER VI—THE FIELD OF INVESTMENT

Problem I

The directors of the A. C. Sugar Refining Company at the end of 1919 adopted a plan of expansion which briefly was as follows:

- a. The construction of an additional unit in its refinery to cost about \$2,000,000, which would double its refining capacity.
- b. The purchase of three large sugar plantations in Cuba in order to insure a full supply of raw sugar for its refinery. The outlay not to exceed \$3,000,000.
- c. The inauguration of a large advertising campaign to popularize its brand of refined sugars, especially its new package goods. It was estimated that \$500,000 would be required during 1920 for this purpose.
- d. The encouragement of advance purchase contracts with sugar jobbers and large consumers at fixed prices, such contracts to extend over periods of from six months to one year. In order to put this scheme into effect unusually liberal terms were granted to customers who thus contracted in advance for sugar supplies. In some cases it was agreed to accept customer's six months' notes, the company making arrangements to sell these notes, after endorsement, to a number of banks.

In order to put the plan into operation, new capital and additional credit were required.

Questions

1. Designate in each subdivision of the plan the class of credit that should be used in obtaining the required capital.
2. What class or classes of investment institutions would advance the funds?

Problem II

At the time the A. C. Sugar Refining Company adopted the foregoing plan, its sole capital liability consisted of \$10,000,000 of stock in shares of \$100 on which the company had paid dividends of 6% in the year 1919. Previously no dividends had been paid, though the company had been in existence five years. Profits in 1919 were barely sufficient for an 8% annual dividend. The company's real estate (*i.e.*, land) had an appraised value of \$1,500,000 and its buildings and machinery cost \$1,500,000. It carried stocks of raw and refined sugar at the end of the year valued at \$1,000,000 but this was offset by bank loans and other obligations of the same amount.

Questions

1. Could the company obtain a real estate loan, and to what extent?
2. Could it issue bonds and to what extent? Could it sell additional stock at one hundred cents on the dollar?
3. Would the stock be "an investment stock" or would it be purchased as a speculation?
4. Would there be an advantage to the investor, if preferred stock, rather than common stock were issued?

CHAPTER VII—CLASSIFICATION OF INVESTMENT BONDS**Problem**

Classify each of the following bonds in accordance with the features discussed in the text:

United States 2nd conv. Liberty Loan, $4\frac{1}{4}\%$, 1942, op. 1927
 Republic of Poland External S. F. 8s, 1950
 City of New York, registered, $3\frac{1}{2}\%$, 1950
 Ontario, Province of, 5%, 1942
 City of Regina, $4\frac{1}{2}\%$, 1931
 Cove, Montana, Irrigation District Serial 6s, 1935
 Atchison, Topeka & Santa Fe Ry. Genl. Mtge. 4%, 1995
 Atchison, Topeka & Santa Fe Ry. Co. Adj. 4%, 1952
 Atlantic Coast Line R. R. Co. 1st cons. Mtge. 4%, 1925
 Central Pacific Ry. Co. 1st Ref. Mtge. 4%, 1949
 Chicago, Burlington & Quincy R. R. Co., Ill. Div., $3\frac{1}{2}\%$, 1949 op. 1929
 New York, Westchester & Boston Ry. Co. guaranteed 1st Mtge. $4\frac{1}{2}\%$, 1946
 Portland Terminal Co. 1st Mtge. 4%, 1961
 St. Louis San Francisco Income Ser. A6%, 1960
 American Telephone & Telegraph Co. $5\frac{1}{2}\%$, 1943

Bush Terminal Building Co. 1st Mtge. S. F. 5%, 1960
Midland Steel Products 1st Conv. S. F. 7%, 1938
Standard Oil of California 5% Serial Notes, 1929
Producers & Refiners Corporation 1st S. F. Gold 8%, 1931, with detachable warrants

CHAPTER IX—MECHANICS OF INVESTMENT

Problem—Financing a Merger

The D. T. Steel Company located in an automobile manufacturing center and producing high grade steel products such as automobile parts, engine accessories, etc., had been operated successfully for a number of years as a closed corporation. It was unable, however, to take advantage of all the business offered it because of inadequate facilities and lack of cash funds. Several of its best customers threatened to withdraw their orders unless the goods could be turned out more promptly. As the company's total resources did not exceed \$1,000,000 and as its loans from the local banks had reached the limits available to it, the directors sought additional capital from New York investment bankers.

While negotiations were in progress, it was learned that another concern producing similar steel articles could be acquired. This latter company had an excellent manufacturing plant and was reported to have earned large profits, but owing to the death of the owner, its business had fallen off and the heirs were willing to dispose of their interest at a reasonable price. The net profits during previous years had ranged from \$100,000 to \$300,000 annually and the value of the plants were appraised at over \$1,500,000.

The bankers succeeded in obtaining an option on this plant at \$2,000,000 in cash and at the same time persuaded the owners of the D. T. Steel Company to merge their business with that of the concern. It was agreed that the stockholders of the D. T. should be paid partly in cash and partly in securities of the new company.

Questions

1. What information would the bankers desire before completing the merger?
2. What would be the nature of their investigations and whom would they employ for this purpose?
3. How would they obtain a profit for themselves?
4. Draw up—(a) A letter for the bankers in which they invite another banking house to participate in the proposition of organizing and financing the merger.
(b) A form of capitalization for the new corporation, giving classes and amounts of securities to be issued and the part thereof to be publicly offered.
(c) The "selling group" letter.
(d) The circular advertising the issue.

CHAPTER XI—COMMERCIAL LOANS AS INVESTMENTS

Problem

The W and C Packing Company carried lines of credit with various banks averaging in all throughout the year about \$20,000,000. In addition, it had outstanding an issue of \$10,000,000 of 6% first mortgage bonds which were an absolute lien on all its real estate, plants and machinery. Another issue of bonds, which were convertible into the company's stock, but were not a mortgage on any of its assets amounted to \$12,000,000. Repayment of the latter bond issue which carried an annual interest rate of 7% was to be made by an appropriation each year to purchase \$1,000,000 face value of the bonds for first five years, \$2,000,000 in each of the following two years and \$3,000,000 the year thereafter. As the company paid no dividends on its stock (amounting to \$10,000,000) there was little likelihood that it would be relieved of its indebtedness by having the bonds converted into stock. Because of overproduction in the packing industry the company in 1923 failed to show net profits sufficient to meet its interest charges; moreover, as stated above, it was required to set aside \$1,000,000 to purchase its convertible bonds in the market. A shortage of cash developed and the company applied to the banks for additional short-time loans.

Questions

1. Would the banks be justified in granting the additional loans?
2. Would note brokers be justified in offering the notes of the company to banks and institutions as investments?
3. How should the loans be secured to make them marketable as investments?
4. What effect would the mortgage bonds have on the company's current borrowing facilities?
5. Are banks justified in granting a short term unsecured commercial credit to enable the company to obtain the sum required annually to buy in its bonds?
6. Under what conditions would the company's short-term notes be better secured (as an investment) than the unsecured convertible bonds?
7. In the event of bankruptcy of the company, would the banks that granted "lines of unsecured credit" be in a preferred position as compared to the company's bondholders?

CHAPTERS XII-XIII—REAL ESTATE MORTGAGES

Problem I—Determining the Amount and Maturity of a Real Estate Loan

John Smith, a resident of Albany, New York, owned a piece of real estate at the southern end of the city, consisting of land and an old brick

building, formerly occupied by a jobbing concern, but of late years rented as a storage loft by a railroad company. The rental was \$1,500 annually, the railroad company agreeing to attend to repairs and maintenance arising from ordinary wear and tear. The assessed valuation for taxation purposes was \$12,000 and the taxes paid varied from \$300 to \$350 annually. The assessed valuation was reputed to be 75% of the actual value. The building was in poor physical condition, as the railroad company, having a year-to-year lease, expended very little for repairs; moreover, it was well known that as soon as the company's proposed new office building was constructed, the lease would be cancelled.

The location of the property at one time was the principal wholesale business center of the city, but as Albany, like many other cities had declined in importance as a jobbing center, the district changed in character. Merchandising concerns were replaced by small factories, garages and storage companies. There was a possibility that the railroad company would remove its freight yard from this section when its new general office and freight building would be completed, though definite plans for the removal had not been announced.

Smith, who owned the property, unencumbered by mortgage, needed more capital for a new business venture, and not being able to dispose of it at a price he considered fair to himself, applied through a broker for a loan of \$5,000 to be secured by a mortgage on the property.

Questions

1. What means would an investor use to determine the market value of the property?
2. What circumstances connected with the property were unfavorable as a basis of security for the loan?
3. If the property were appraised at its assessed value for taxation purposes, would a savings bank in the City of Albany be permitted to grant the \$5,000 loan required by Smith?
4. Could the property be considered as "improved" real estate, *i.e.*, land with income earning property constructed thereon?
5. Would the building on the property be taken into consideration in making an appraisal of its value?
6. Would an investor be justified in granting the loan for a period of ten years or more?

Problem II—A Large Loan on an Office Building

The following circular advertises an issue of real estate mortgage bonds.

Questions

1. Would you regard these bonds as a good investment for a widow dependent on her investments for a livelihood, or for a trust fund held for minor children? Give reasons for your answers.

LEGAL FOR THE INVESTMENT OF TRUST FUNDS
UNDER THE LAWS OF THE STATE OF NEW YORK

\$3,500,000

CHESEBROUGH BUILDINGS

Chesebrough Building Company

FIRST MORTGAGE 25-YEAR 6% SINKING FUND GOLD LOAN

Dated October 1, 1923

Due October 1, 1948

Interest payable semi-annually April 1 and October 1. Principal and interest payable in New York in United States gold coin. Coupon in form and in denominations of \$1,000 and \$500; registerable as to principal. Redeemable at the option of the company as a whole or in part on any interest date, on thirty days' notice, at 105 and accrued interest during the first ten years; thereafter during the next ten years at 102½ and accrued interest, and thereafter during each succeeding year at ½ of 1% less each year or part thereof, and accrued interest.

Interest payable without deduction of normal Federal Income Tax
not exceeding 2%

Exempt from personal property tax in the State of New York

CENTRAL UNION TRUST COMPANY OF NEW YORK, TRUSTEE

The following facts are summarized from a letter of Mr. A. H. Fromm, Vice-President of the Chesebrough Building Company to A. B. Leach & Co., Inc. and Halsey, Stuart & Co., Inc.

PROPERTIES AND
LOCATION:
*Situated in lower
Manhattan.*

The properties owned in fee by the Chesebrough Building Company, are located in lower Manhattan, in one of the most important business sections of the downtown area of New York City. All of the properties are contiguous to or face on Battery Park. Exceptional transit facilities are afforded by subways, elevated and surface lines and ferries, the terminals of which are in close proximity to these properties.

SECURITY:
Absolute first mortgage on land and buildings owned in fee and appraised at over 150% of this Loan.

This Loan is to be secured by an absolute first (closed) mortgage to Central Union Trust Company of New York, as Trustee, upon all the hereinafter described lands and buildings, owned in fee. The total assessed valuation for taxation for 1923 is considerably in excess of this Loan. The properties were recently appraised by Joseph P. Day, Inc., and Charles F. Noyes Company, as follows:

Joseph P. Day, Inc.....	\$5,451,000
Charles F. Noyes Company.....	5,348,250

The titles to the properties are to be insured by The Title Guarantee & Trust Company. The mortgage provides for protection by insurance satisfactory and payable to the Trustee, while any part of this Loan is outstanding. The Company also carries adequate rent insurance.

LEGAL
*for Trust Funds in
State of New York.*

On the basis of the above appraisals, this Loan, in opinion of counsel, is legal for the investment of trust funds under the laws of the State of New York.

The earnings from these properties for the years ended June 30, 1922 and 1923, respectively, were as follows:

	1923	1922
EARNINGS:		
Gross Revenues	\$943,028	\$928,008
Operating Expenses, Maintenance, Insurance and Taxes	340,702	353,370
Net Income Available for Interest and Reserves	\$602,326	\$574,638
Annual Interest Charges on this Loan amount to	\$210,000	

The net income for the year ended June 30, 1923, as shown above is equal to nearly three times the maximum interest charges and equal to more than two and one quarter times interest and sinking fund charges combined.

CHAPTER XIV—MUNICIPAL BONDS

Problem

The following statistics were furnished by a municipality in compliance with a request from investment bankers:

CONDENSED FINANCIAL STATISTICS

(Bond Dealers' Association Form)

CITY OF LETHBRIDGE	Alberta
ASSESSMENT	
Assessed value for Taxation, year 1924.....	\$9,600,785.00
Rental Assessment	510,635.00
Exemptions not included above	6,242,615.00
Tax Rate 1924:—General 29.54. Debenture 8.61. School 16.46. Alta. Govt. Supplementary (Land only) 2.26.....	Total 44.67 mills
Total Accumulated Tax Arrears at end of last Fiscal Year.....	212,549.63
Amount of last year's tax levy in City..... \$554,602.74 includes all Govt. Tax.	
Ditto in School District outside City..... 3,014.20.....	517,616.94
Amount of last year's Tax Levy uncollected.....	118,495.99

ASSETS AND LIABILITIES

Value of Municipality's Assets at Dec. 31, 1924.....	\$3,906,982.40
Total Debenture Debt (including present issue as divided below).....	3,775,796.46
General Sinking Fund (as divided below).....	1,134,823.65
Amount of Sinking Fund in arrears.....	555,809.92

ANALYSIS OF DEBT (including present issues) AND SINKING FUND—DIVIDED AS FOLLOWS

PUBLIC UTILITIES:	Debentures Outstanding	Sinking Fund on Hand
Waterworks	\$ 471,743.17	\$ 133,712.15
Electric Light	734,851.66	276,726.75
Street Railway	466,170.55	138,198.88
LOCAL IMPROVEMENTS:		
Ratepayers' Share	471,504.65	84,652.60
Municipality's share (included in General).....		
GENERAL DEBENTURES (not included above).....	1,631,526.43	424,122.60
SINKING FUND RESERVE.....		77,410.93
Totals	\$3,775,796.46	\$1,134,823.91

What amount of the total outstanding bonds, as indicated above, is issued by the instalment method?....	\$ 347,230.83
What amount of the total outstanding bonds is issued by the Sinking Fund method?.....	3,428,565.63
What is amount of unsold Debentures included in above?	None
Amount of Bonds Guaranteed by Municipality.....	None
Amount of School Debentures	
Lethbridge Public Sch. Dis. No. 51 (instal.).....	223,557.68
Lethbridge Separate Sch. Dis. No. 9 (instal.).....	37,500.00
Amount of Municipality's share of the above.....	None
Total other Liabilities, including Floating Debts (not including Sinking Fund Arrears).....	196,113.96
Current Revenue, year 1924.....	\$ 743,337.53
Expenditure.....	718,407.32

PUBLIC UTILITIES

	Profit after Deducting Op- erating Charges only	Net Profit after Deducting Depre- ciation, Operating Expenses and In- terest and Sinking Fund on Debt
Results for year ending Dec. 31st, 1924, Waterworks Plant.....	\$ 62,813.48	\$ 6,597.83
Electric Light Plants.....	107,851.66	17,506.70
Street Railway (deficit).....	6,336.93	44,999.54 Def.
(Street Railway Deficit provided for in Tax Rate.)		

GENERAL

Present Population.....	12,000	Population 5 years ago.....	10,500
Estimated Population 1921 Census	11,097	Area of Municipality.....	532 acres
Name of Mayor.....		W. D. L. Hardie	
Address.....		City Hall, Lethbridge, Alberta	
Name of Treasurer.....		T. H. Fleetwood	
Address.....		City Hall, Lethbridge, Alberta	

I believe the above information to be correct.

DONALD A. DUFF,
City Clerk,
Lethbridge, Alberta.

Date, April 15th, 1925.

NOTES REGARDING MUNICIPALITY OF LETHBRIDGE
PROVINCE, ALBERTA

- Please give a short description of the Municipality.
 - Location on main line of Crow's Nest Pass Route; 110 miles West from Dunmore Junction; 125 miles South of Calgary; 200 miles North of Great Falls, Montana, U. S. A.
 - When was the Municipality incorporated? As a Town in 1890—as a City in 1906.
 - What percentage is the assessment of the real value? Land 100%; Improvements 66 and 2/3%.
 - What is the estimated real value of all land and improvements in your Municipality? \$15,793,450.
- What are the railway facilities? Main Line Crow's Nest Branch and Western terminus of Lethbridge Weyburn Branch C. P. R. 5 Branch lines radiating from Lethbridge and surrounding country.
- What steamer connections? (If any.) None.
- Describe the Chief Industries of the municipality, and give approximately the number of employees in some of the more important. Coal mining 13,000 men; C. P. R. 1500. Flour Mills 75. Brewing 100.
- Is there anything for which the municipality is specially well known? Galt coal, and center of sheep industry and irrigation farming.

6. How many schools are there in the municipality? Six. What is the average attendance? 2700.
7. What is the character of the surrounding district? Agricultural. The center of two large Irrigation Blocks and well developed farming and ranching country.
8. What are the chief industries and products of the surrounding district? Agriculture, Grain, Mixed Farming, Live Stock, Sheep Ranching, Coal Mining.
9. Is there anything for which the surrounding district is specially well known? Irrigation Rarming, Cattle Raising, Sheep Raising.
10. If there is any descriptive literature about your municipality or the district, issued by the municipality, a newspaper, bank, board of trade or any other public body, please send a copy or state where copies may be obtained. From the Board of Trade—or Department of Agriculture, Province of Alberta, or Secretary Lethbridge, Northern Irrigation District.

DONALD A. DUFF,
City Clerk.

April 15th, 1925.

Question

1. Point out the significance of each item in reference to the investment features related to municipal bonds as given in the text.

CHAPTER XV—NATIONAL GOVERNMENT BONDS

Problems

The following circulars advertising National Government Loans were issued by Bankers:

\$35,000,000

REPUBLIC OF POLAND

25-YEAR SINKING FUND EXTERNAL 8% GOLD BONDS

Dated January 1, 1925

Payable at 105% on or before January 1, 1950

Total authorized issue \$50,000,000. Interest payable January 1 and July 1. Coupon bonds in denominations of \$1,000, \$500 and \$100 registerable as to principal. Principal, premium and interest payable in United States gold coin at the office of Dillon, Read & Co., New York, without deduction for any Polish taxes present or future

A Sinking Fund is provided to redeem the entire issue by maturity at 105% and interest, by semi-annual call by lot of one-fiftieth of total amount issued, beginning July 1, 1925

In addition to being subject to Sinking Fund redemptions, beginning July 1, 1925, bonds redeemable as a whole, or in part by lot, on any interest date after July 1, 1936, at 105 and interest

Application will be made forthwith to list these bonds on the New York Stock Exchange

The American Exchange National Bank, New York, Countersigning Agent

The following information is contained in a letter addressed to us by His Excellency W. Wroblewski, Minister Plenipotentiary of the Republic of Poland to the United States:

"The boundaries of the Republic of Poland were established in 1919 by the Treaty of Versailles and by agreement with adjoining countries. Poland has been a member of the League of Nations since its inception. The record of financial and economic progress in Poland constitutes an outstanding achievement among European nations since the war and may be summarized as follows:

1. The creation of a stable currency with a reserve of 65% gold and gold securities;
2. A balanced budget—in 1924 total Government receipts exceeding total expenditures by \$14,282,000;
3. A normal surplus of exports over imports;
4. A Government-owned railroad system of 14,000 miles showing in 1924 an excess of receipts over operating expenses;
5. The funding of the Government's debt to the United States and to all other countries

The Constitution of Poland provides for a president, whose term of office is seven years, and a Senate and Diet, elected by general suffrage. It has an area of 150,000 square miles, and a population in excess of 27,000,000, in which respect it is the fifth largest in continental Europe. The country is primarily agricultural, and is at present the chief producer in Europe of rye, the second in production of potatoes, third in barley and oats, and fourth in beet sugar. The textile industry in Poland is highly developed, as well as the oil, sugar refining, iron and steel, chemical and timber industries. Polish coal production is next in volume to that of Germany and France, and there exist important deposits of salt, iron, zinc and other minerals.

FINANCES

The external funded debt of Poland on December 31, 1924 amounted to \$320,380,000 and the internal debt to \$26,441,000, a total of \$346,821,000, or approximately \$13 per capita. Of the above external debt, all but approximately \$50,000,000 consists of debts to foreign governments contracted since the war for reconstruction purposes. Under the Treaty of Versailles, Poland will eventually assume certain obligations, the amount of which is not yet determined, in connection with former German and Austrian territory allotted to her. As against the above debt, Government-owned properties, including railroads, forests, tobacco factories, mineral and oil lands, refineries, salt mines and other assets were valued on May 1, 1924 at approximately \$1,260,000,000. The Government purposes that the entire proceeds of this loan are to be expended solely for constructive and productive purposes.

SECURITY

These bonds are a direct obligation of the Republic of Poland, and the authorized issue, limited to \$50,000,000 of which \$35,000,000 is to be presently outstanding, is specifically secured by the revenue derived by the Government from the Sugar Tax, amounting in 1924 to \$10,422,000, and by the gross receipts of the Government railroads. Receipts from the Sugar Tax will be deposited as received in the Bank of Poland to be employed in meeting the interest and sinking fund requirements of this issue. The Government covenants that if the annual proceeds of this Tax shall in any year fall below \$10,000,000, other revenues will be added to the amount so deposited to make up that sum. So long as any of the bonds of this issue are outstanding the Government covenants that it will not subject the receipts from the Sugar Tax, or the gross revenues of the railroads, to any charge which is not specifically subordinated to the lien of these bonds.

In point of railroad mileage, Poland is next in importance in continental Europe to Germany and France. The Government system, acquired under treaties concluded after the war, is approximately 14,000 miles in length, and has an estimated value, including rolling stock, in excess of \$800,000,000. The lines are free from mortgage debt, with the exception of liens now outstanding on certain sections amounting to approximately \$10,000,000. In 1924 the total revenue of the railroads was \$159,225,000, of which \$146,680,000 were receipts derived from operations, and the balance from Government and other credits. Operating expenses were \$141,855,000, and the outlay for capital investment was \$17,370,000."

(All above conversions are at 19.3 cents per Zloty)

\$7,500,000

STATE LOAN OF THE KINGDOM OF HUNGARY 1924

7½% SINKING FUND GOLD BONDS

Dated August 1, 1924

Due February 1, 1944

Interest payable February 1 and August 1. Principal and interest payable in New York at the office of Speyer & Co., in United States Gold Coin of present standard of weight and fineness, without deduction for any Hungarian taxes, present or future. Coupon Bonds in denominations of \$1,000, \$500 and \$100.

Not subject to redemption before February 1, 1934, except for Sinking Fund

Redeemable at any time on and after that date, at the option of the Government, with the consent of the Trustees, as a whole (but not in part except for Sinking Fund), upon not less than six months' notice, at par and accrued interest.

Cumulative Annual Sinking Fund, beginning February 2, 1925, sufficient to redeem the entire issue at or before maturity, to be applied to redemption of Bonds through purchase in the market, if obtainable at less than par and accrued interest, or, if not so obtainable, through annual drawings by lot at par and accrued interest.

These Bonds and £7,902,700 Sterling Bonds to be offered simultaneously in London by Messrs. Baring Brothers & Co., Ltd., N. M. Rothchild & Sons and J. Henry Schröder & Co., are part of an International Loan to be issued also in Czechoslovakia, Holland, Italy, Sweden, Switzerland, Hungary and other countries, in various currencies, for amounts sufficient to yield to the Government in the aggregate an effective sum not exceeding the equivalent of 250,000,000 Hungarian Gold Crowns, or about \$50,650,000.

Guarantees established for the protection of the Bondholders.

The following is a summary taken from a statement which has been approved by Hon. Jeremiah Smith, Jr., Commissioner-General of the League of Nations for Hungary and by Baron Frederick de Koranyi, Hungarian Minister of Finance:

The Loan is issued pursuant to the Geneva Protocols, dated March 14, 1924, approved by the Council of the League of Nations and ratified by the Hungarian Government, for the purpose of effecting the financial and economic reconstruction of Hungary in accordance with the plan of the Council of the League. This plan provides for the stabilization of the Hungarian currency and the balancing of the budget on a permanent basis through taxation by June 30, 1926. The execution of this plan is under the supervision of the Commissioner-General appointed by the Council of the League and responsible to it. Hon. Jeremiah Smith, Jr., of Boston, has been appointed to this office. The proceeds of the Loan will be placed under the control of the Commissioner-General and will be used to cover the excess of expenditures over revenues during this period of reconstruction.

The Loan will be secured by a first charge on the gross revenues from the Customs, the Sugar Tax, and the Tobacco Monopoly, and the net revenue from the Salt Monopoly. The receipts from these revenues for the first four months of 1924 were at the rate of about 80,000,000 Gold Crowns (about \$16,208,000) per annum, or over two and one-half times the annual requirements for interest and sinking fund payments on the Loan amounting to about \$6,280,600. The Loan will be additionally secured, if required by the Commissioner-General (or by the Trustees for the Bondholders when no Commissioner-General is functioning), by a first charge on any other revenues (except those of the State Railways) and assets of the Government. The security for this Loan will extend to any loan which the Government may issue to redeem on or after February 1, 1934, the then outstanding balance of any issue forming part of this Loan, but no other lien on the above revenues and assets may be created ranking in priority to or *pari passu* with the lien of this Loan.

By agreements with the United States, Great Britain, and other nations interested, the obligations for Relief Bonds have been subordinated to the lien of this Loan, and all charges for Reparations, imposed under the Treaty of Peace, have likewise been subordinated by the Reparation Commission.

The revenues pledged will be paid, as collected, into a special account, controlled by the Commissioner-General and, when no Commissioner-General is functioning, by the Trustees for the Bondholders appointed by the Council of the League of Nations. Out of these funds there will be transferred to the Trustees, in accordance with the terms of the Loan, on the first of each month, one-twelfth of the annual requirements for interest and sinking fund.

A Reserve Fund in cash, sufficient to cover one-half of the annual interest and sinking fund requirements of the Loan, is to be kept on deposit with the Trustees to meet any deficiency in the service of the Loan. Any amount drawn from this fund is to be forthwith made good by the Hungarian Government.

Control by the Commissioner-General will continue until the Council determines that financial stability is assured, but such control may be reestablished at any time while any part of the Loan is outstanding, if the balance of the budget or the security for the Loan is endangered.

Great Britain, France, Italy, and the neighboring States of Rumania, Yugoslavia and Czechoslovakia, in a Protocol signed March 14, 1924, joined with Hungary in solemn declaration to respect the political and economic independence, territorial integrity and sovereignty of Hungary, and the guarantees established for the protection of the bondholders.

Hungary occupies an area of 35,911 square miles, with a population, according to the census of 1920, of 7,987,000; its area is approximately three times that of Belgium or Holland, and its population is greater. Budapest, the capital and principal city, with a population of 928,996, is a center of rail and inland water transportation, and is the leading flour milling city in Europe. The country is mainly agricultural; it is self-supporting as to food supply and rich in natural resources.

\$11,000,000

GREEK GOVERNMENT

FORTY-YEAR 7% SECURED FUND GOLD BONDS

Part of the Refugee Loan of 1924

Authorized by the Council of the League of Nations

Dated November 1, 1924

Due November 1, 1964

Interest payable May 1 and November 1. Principal and interest payable in New York, at the office of Speyer & Co., in United States Gold Coin of the present standard of weight and fineness, without deduction for any Greek taxes, present or future. Coupon Bonds in denominations of \$1,000 and \$500.

Sinking Fund: Cumulative Sinking Fund of $\frac{1}{4}\%$ per annum, sufficient to redeem the entire Loan at or before maturity. Additional Sinking Fund, equal to 75% of capital repayments referred to below, estimated to amount, after 1928, to about \$2,800,000 per annum, of which amount about \$500,000 would be applicable to the American issue. Sinking Fund to be applied to redemption of Bonds through semi-annual drawings at par.

Not subject to redemption before May 1, 1936, except by Sinking Fund operating by drawings at par. The Government reserves the right on that date, or on any interest date thereafter, to increase the Sinking Fund, or to pay off at par the whole Loan on giving three months' previous notice.

These Bonds are part of an International Loan (total authorized amount £12,300,000, equal at par of exchange to about \$59,858,000), the balance of which, namely £7,500,000 Sterling Bonds have been sold, through public subscription, in London by Hambros Bank Limited, and £2,500,000 Sterling Bonds are being offered in Athens by the National Bank of Greece. This Loan is issued pursuant to the Geneva Protocols, dated September 20, 1923 and September 19, 1924, ratified by Acts of the Greek Parliament, dated June 7 and October 24, 1924, and the Resolutions of the Council of the League of Nations, dated September 29, 1923 and September 19, 1924.

Monsieur Demetrius Caclamanos, Envoy Extraordinary and Minister Plenipotentiary of Greece in Great Britain, has authorized the following statement in behalf of the Greek Government:

PURPOSE: The purpose of this Loan is to provide funds for establishing on the land or in industry Greeks who lived in Turkey and who, in accordance with the Treaty of Peace with that country, are transferred to Greece. The number so transferred is approximately 1,500,000. For this work a Refugee Settlement Commission has been established by the Greek Government with the approval of the Council of the League of Nations, which will have supervision over the operations of the Commission. It consists of two members appointed by the League, one of them an American citizen, who is to be Chairman, and two members appointed by the Greek Government with the approval of the League. Hon. Henry Morgenthau was the first Chairman and has been succeeded by Hon. Charles P. Howland of New York.

The proceeds of the Loan, after repayment of advances amounting to about \$16,450,000 from the Bank of England and the National Bank of Greece for the work of the Commission, will be placed at the disposal of the Commission and the Government has undertaken to transfer to it, free of charge, about 1,250,000 acres of land suitable for cultivation, houses, and urban real estate, the value of which is estimated at more than \$48,000,000. The Commission plans to grant the lands to settlers on terms involving repayment in semi-annual instalments with interest over a period of not more than fifteen years and to make advances, from the funds at its disposal, for productive purposes on similar terms.

SECURITY: The Loan will be the direct obligation of the Greek Government and will be secured by:

- | | |
|---|--------------|
| (1) A first charge on revenues to be collected under the control of the International Financial Commission, the yield of which for the year 1925 is estimated (on the basis of receipts for the nine months ended September 30, 1924) at about..... | \$12,245,000 |
| The revenues so pledged are the receipts from monopolies (i.e., salt, matches, playing cards and cigarette paper), tobacco and stamp duties in the new territories of Greece, from the customs at Canea, Candia, Samos, Chios, Mytilene and Syra, and from the alcohol duty in the whole of Greece (the last named revenue is subject, however, to a contingent prior charge of about \$400,000). | |
| (2) A charge upon the surplus of revenues heretofore assigned to the International Financial Commission over requirements for the service of the loans for which such revenues have been pledged. This surplus for the year 1925 is estimated (on the basis of the receipts for the first nine months of 1924) at about | \$13,731,000 |
| Total about | \$25,976,000 |

The above revenues pledged for this Loan should equal about six times the annual interest and sinking fund requirements amounting (at par of exchange for Sterling) to about \$4,475,000.

- (3) A first charge on the property and income of the Refugee Settlement Commission. It is estimated that the value of the property and assets of the Commission after the proceeds of this Loan have been applied as planned will be approximately \$94,000,000 and that, taking a period for repayment of fifteen years, the receipts from repayments for lands sold, moneys advanced and rents, should, on an equal annual instalment basis, amount after 1928 to not less than \$4,700,000 per annum or more than the annual requirements for the service of the Loan. Approximately four-fifths of this amount, it is estimated, will be repayments of capital, 75% of which, or over \$2,800,000 are to be applied as an additional sinking fund for redemption of Bonds of this Loan.

The International Financial Commission referred to above was formed in 1898 to control the collection of, and to administer the revenues assigned to the service of Greek Government Loans. The members of the Commission are representatives of the Governments of Great Britain, France and Italy. It has accepted irrevocably the order of the Greek Government to retain from the revenues pledged for this Loan the amounts required for payment of interest and sinking fund.

Since 1898, during which time the country has passed through two Balkan wars and the great European war, Greece has consistently maintained payments due under the obligations of her external debt.

GENERAL: Greece occupies an area of approximately 33,000 square miles. The population is estimated at 7,000,000, of which about two-fifths is in the new territories added to Greece since 1913. In area the country is about as large as Austria, and it is about three times as large as Belgium and Holland. The population is greater than that of Austria and it is about the same as that of Belgium or Holland. The country

is mainly agricultural. Industry has made considerable progress. The merchant marine of Greece amounts to about 900,000 tons. The country benefits materially by remittances from emigrants, a large part of which is from the United States.

Except as otherwise stated, the dollar amounts shown above have been converted at the rate of 250 Drachmæ per Pound Sterling and \$4.70 per Pound Sterling.

Questions

1. Point out the significance of each item of information.
2. Has any important factor of national credit been omitted?
3. Is there any legal means of enforcing the special liens given the bondholders?
4. Compare or contrast the relative investment merits of the three issues.

CHAPTER XVI—UNITED STATES GOVERNMENT BONDS

Questions

On the basis of the description of the various United States Government Loans described on pages 195 *et seq.* point out the investment advantages or disadvantages of each with respect to the following features:

1. Tax exemption.
2. Maturity.
3. Redemption privileges before maturity.
4. Investment yield (based on current quotations).
5. Eligibility as collateral for rediscount at the Federal Reserve Banks.

CHAPTER XVII—STATE BONDS

Problems

On the basis of the following circulars and other available information, contrast the investment merits of the bonds of the states of North Dakota and of North Carolina.

\$1,000,000

STATE OF NORTH DAKOTA

5¼% GOLD BONDS

Dated April 1, 1923

Due Serially as shown below

Principal and semi-annual interest (January and July 1st) payable at the National City Bank, New York City. Coupon Bonds Denomination \$1,000 each. Exchangeable for registered bonds as to principal or as to both principal and interest.

LEGAL INVESTMENT FOR SAVINGS BANKS AND TRUST FUNDS IN
NEW YORK, NEW JERSEY, CONNECTICUT, RHODE ISLAND, VERMONT
MINNESOTA AND OTHER STATES

FINANCIAL STATEMENT OF THE STATE

Assessed Valuation, 1922.....	\$1,308,490,421
Total Bonded Debt, including this issue.....	14,802,000*
Sinking Fund	\$462,808
Net Bonded Debt	14,339,192
Population (1920 Census) 645,872	

*Of the above bonded debt, \$10,100,000 consists of Real Estate Series Bonds secured by assignment of an equal amount of first farm mortgages which are held in trust by the state to secure their payment.

These bonds are a direct obligation of the State of North Dakota, for which the full faith, credit, resources and taxing power of the state are pledged for payment of principal and interest. In addition the bonds are secured dollar for dollar by deposit of first mortgage loans on improved farms (for not more than one-half the value of the security) which are assigned to the state treasurer in trust. Although the law provides a direct unlimited tax for the payment of these securities, a sinking fund is also automatically established through payment of interest and amortized principal on underlying mortgages which will be sufficient to retire the bonds at maturity.

These bonds were issued by the State of North Dakota for the purpose of providing additional credit to her farmers under a plan similar to that of rural credit laws in other states and to the plan in operation under the Federal Farm Loan Act. The validity of the law under which these bonds were issued and the conditions of their issuance has been approved by decisions of the supreme court of North Dakota.

MATURITIES

\$300,000 January 1, 1934 \$200,000 January 1, 1939 \$500,000 January 1, 1949

Price, Any Maturity, to Yield 5%

LEGALITY APPROVED BY MESSRS. WOOD & OAKLEY, ATTORNEYS, CHICAGO, ILL.

\$1,000,000

STATE OF NORTH CAROLINA

5.95% COUPON NOTES

Due October 1, 1923

Callable at any time after one year from date of issue, at 101 and interest, on thirty days' notice.

Principal and semi-annual interest (April 1 and October 1) payable at the First National Bank of New York. Denominations, \$1,000, \$5,000, \$10,000, \$25,000 and \$50,000

*Legal Investment for Savings Banks and Trust Funds in New York State.
Eligible to Secure Postal Savings Deposits at their Market Value
not more than Par.*

FINANCIAL STATEMENT

Assessed Valuation, 1920.....	\$2,500,000,000
Total Debt, including this issue.....	26,450,000

Population, 1920 census, 2,556,000

Debt is approximately 1% of the Assessed Valuation

Legal Opinion of John C. Thomson, Esq., New York

Price—101½ and interest to yield about 5%

CHAPTER XIX-XX—MUNICIPAL BONDS

Problems

Apply the tests of Municipal Bonds as given in Chapters XIX and XX to the issues described below.

\$250,000

CITY OF SEATTLE, WASHINGTON

5% GENERAL OBLIGATION BONDS

Dated December 1, 1923

Due Serially as shown below

Principal and semi-annual interest (June and December 1) payable at the fiscal agency of the State of Washington in New York City. (Equitable Trust Co. of New York.)

Coupon bonds of the denomination of \$1,000 each, with privilege of registration as to principal only or as to both principal and interest.

LEGAL INVESTMENT FOR SAVINGS BANKS AND TRUST FUNDS IN NEW YORK,
NEW JERSEY, MAINE, VERMONT AND MASSACHUSETTS

FINANCIAL STATEMENT

Valuation of Taxable Property for 1923 as determined by Assessor...	\$478,565,744.00
Assessed Valuation of Taxable Property for 1923 (50% of above)....	239,282,872.00
TOTAL DEBT	61,678,896.13
DEDUCTIONS:	
Utility Bonds payable solely from revenues of Public	
Utilities	\$32,984,500.00
Special Assessment Bonds payable solely from special	
assessments	11,615,996.13
GENERAL OBLIGATION DEBT (payable from taxes on all taxable	
property)	\$ 17,078,400.00
Less:	
General obligation Water Debt.....	\$ 2,379,376.80
General obligation Sinking Fund.....	135,025.22
NET GENERAL OBLIGATION DEBT (less than 3.05% of valuation taxable	
property)	\$ 14,563,997.98
Population (1920 Census).....	315,562

These bonds issued for General Improvements, are a direct and general obligation of the entire City of Seattle, and are payable from unlimited taxes on all taxable property therein.

THE CITY OF SEATTLE, Washington, due to its location in that section of the United States which is rich in basic resources, and the unusual shipping facilities both by rail and water which the City commands, makes it one of the chief commercial and shipping centers of the Pacific States.

Free from the Federal Income Tax

\$1,000,000

STATE OF FLORIDA

EVERGLADES DRAINAGE DISTRICT 6% BONDS

Dated January 1, 1921. Denomination \$1,000. Principal and semi-annual interest, January 1st and July 1st, payable in gold at the Office of the State Treasurer or at the State Fiscal Agency in New York City at option of holder. Callable at any interest paying period on sixty days' notice at 102 and interest. Bonds can be registered with the State Treasurer both as to principal and interest.

MATURITIES

July 1, 1925 to July 1, 1940

FINANCIAL STATEMENT, STATE OF FLORIDA

Assessed Valuation, 1920.....	\$409,588,938
Bonded Debt, exclusive of Drainage District Bonds.....	None
Population (1920 Census).....	968,470

The State of Florida is obligated by law to pay the annual drainage taxes expressly levied on all lands owned by the State of Florida within this District and in case the drainage taxes on any other lands in the District are not paid, the title thereto automatically becomes vested in the State of Florida in the absence of other bidders at delinquent tax sale and the State is thereafter obligated to pay the drainage taxes on these lands the same as on all other lands owned by the State within said District so that in effect the State of Florida guarantees the payment of all drainage taxes, and the bonds payable from said taxes.

The State of Florida owns approximately 1,250,000 acres of land within this District valued at over \$40,000,000 upon which drainage taxes are expressly levied under the Statute authorizing these bonds. The District embraces 4,927,759 acres in Southern Florida, including over 90% of the three important Counties of Palm Beach, Dade and Broward and a large portion of the five Counties of Monroe, Lee, De Soto, Okeechobee and St. Lucie. The total amount of Everglades District bonds outstanding, including this issue, is \$5,400,000. These bonds are not only an indirect obligation of the State of Florida, but are also a direct and general obligation of said District.

These bonds are signed by the Governor, State Treasurer, State Comptroller, Attorney General, and Commissioner of Agriculture. The management and control of said District are vested in these State Officials as the Board of Commissioners of Everglades Drainage District.

These bonds have been validated by the Supreme Court of Florida. Each bond has endorsed thereon the approving opinion of the Attorney General of Florida which under the law makes these bonds incontestable for any reason except on the ground of forgery.

*These bonds are receivable by the State Treasurer to secure State Deposits
Legality approved by John C. Thomson, Esq., New York City*

Price 101 and Interest

\$1,160,000

CITY OF CLEVELAND, OHIO

4¾% IMPROVEMENT BONDS

Dated April 1 and June 1, 1924

Due October and December 1, as shown below

Principal and semi-annual interest (June 1 and December 1 and April 1 and October 1) payable at the American Exchange National Bank, New York City. Coupon bonds in denominations of \$1,000 which may be exchanged for bonds, registered as to principal and interest.

Exempt from Federal Income Taxes

Legal investment for Savings Banks in New York,
Massachusetts and Connecticut

FINANCIAL STATEMENT

(Officially Reported)

Assessed Valuation 1923	\$1,867,162,970
Total bonded debt including this issue.....	117,334,018
Less Water Debt	\$29,700,808
Sinking Fund	15,516,118
Net bonded Debt	72,117,102
Ratio net bonded debt to assessed valuation about 3.8%	
Population 1920.....	796,841

These bonds issued for sewers, paving and the elimination of grade crossings constitute a direct obligation of the City of Cleveland and in accordance with the laws and Constitution of the State of Ohio the faith and credit of the City are pledged for the payment of both principal and interest when due.

AMOUNTS AND MATURITIES

\$460,000 Grade Crossing Bonds

Dated April 1, 1924

Due \$18,000 on October 1, each year 1930-1944 inclusive

Due \$19,000 on October 1, each year 1945-1954 inclusive

\$300,000 Paving Bonds

Dated June 1, 1924

Due \$50,000 on December 1, each year
1929-34 inclusive

\$400,000 Sewer Bonds

Dated June 1, 1924

Due \$20,000 on December 1, each year
1930-49 inclusive

To Yield 4.10%

Legality of this issue to be approved by Messrs. Squire, Sanders & Dempsey

CHAPTER XXI—CORPORATION FINANCIAL STATEMENTS

Problem I

What criticisms would you make in reference to the following income and profit and loss statement?

THE AMERICAN SUGAR REFINING COMPANY
and Its Domestic Constituent Companies

Income and Profit and Loss Statement for Year 1924

Income from Investments	\$ 2,593,049.45
Interest	1,644,615.09
Sale of Investments—Gain	8,209,380.23
Adjustment, Tax Reserve	1,000,000.00
	<u>\$13,447,044.77</u>
Operation Loss	\$ 327,637.38
Interest on Bonds	1,800,000.00
Dividends declared during year 1924	3,149,986.00
	<u>5,277,623.38</u>
Balance added to Surplus	<u>\$ 8,169,421.39</u>

Surplus, December 31, 1924

Balance, December 31, 1923	\$ 8,066,239.16
Added to Surplus December 31, 1924, as per Income and Profit and Loss Statement	8,169,421.39
Balance, December 31, 1924	<u>\$16,235,660.55</u>

Sundry Reserves, December 31, 1924

Balance, December 31, 1923	\$22,222,945.59
Deduct—Loss in 1924 on 1920 Contracts	\$1,232,709.49
Adjustment of Accounts Receivable	180,287.08
	<u>1,412,996.57</u>
Balance, December 31, 1924	<u>\$20,809,949.02</u>

Problem II

The following is Profit and Loss (Surplus) Adjustment statement of a large public utility holding company.

CORPORATE SURPLUS—

1. Balance December 31, 1923.....	\$9,004,826.08	
2. Adjustment of Surplus Account of companies merged during year.....	26,588.07	
3. Net income year ending December 31, 1924, from statement of combined results of operations.....	\$8,013,118.23	\$8,978,238.08
4. Addition to surplus from intercompany sale of Public Service Newark Terminal Building and real estate adjacent thereto	\$2,432,898.55	
Deduction from surplus for expense of financial reorganization	1,710,512.15	
	<u>722,386.40</u>	
	\$8,735,504.63	
5. Less dividends on Cumulative Preferred Stock of Public Service Corporation of New Jersey:		
8% Cumulative Preferred Stock	\$1,720,688.00	
7% Cumulative Preferred Stock	709,358.11	
	<u>2,430,046.11</u>	
	\$6,305,458.52	
6. Dividends on Common Stock of Public Service Corporation of New Jersey	2,959,329.99	
	<u>\$3,346,128.53</u>	
7. Dividends to minority interest on stock of operating subsidiaries....	1,278.25	
	<u>3,344,850.28</u>	
Balance December 31, 1924.....		12,323,088.29
		<u>\$438,463,031.60</u>

Questions

1. On what basis would you criticize the addition of item 4 to surplus?
2. Does the statement indicate that the dividends were earned in 1924?
3. What readjustments would you make to show the actual earnings and charges against same for the year?

CHAPTER XXII—THE BALANCE SHEET

Problem

Contrast the following two balance sheets of large automobile companies, working out the following features: (1) Valuation of assets;

(2) intangible assets; (3) net working capital; (4) equity of preferred and common stocks.

DODGE BROTHERS, INC.

GENERAL BALANCE SHEET AS OF APRIL 1, 1925

ASSETS

CURRENT ASSETS:

Cash	\$13,621,440.40	
U. S. Securities	10,533,564.21	
Municipal bonds and commercial paper	1,995,295.80	\$ 26,150,300.41
Other marketable securities		103,620.00
Accounts Receivable		10,153,923.15
Inventories		16,014,477.52
Total		\$ 52,422,321.08

OTHER ASSETS AND INVESTMENTS:

Secured Notes Receivable due 1930	1,150,000.00
Land Contracts Receivable	1,067,053.99
Investment in subsidiaries including accrued surplus	412,733.35

PROPERTY:

Land as appraised by Mr. Edward I. Stimson ...	\$ 9,265,661.05	
Land Improvements at cost less depreciation	162,148.72	
Buildings, Machinery and Equipment, etc., as appraised by Manufacturers' Appraisal Co.	38,191,877.47	47,619,687.24

Prepaid Insurance Premiums	94,697.72
Good-will	1.00

Total	\$102,766,494.38
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LIABILITIES

CURRENT LIABILITIES:

Accounts Payable and Sundry Accruals	\$ 14,241,074.00
Dealers deposits	591,410.47
Remainder of 1924 Federal Income Taxes	1,832,508.43
Total	\$ 16,664,992.90

RESERVES:

Contingencies	\$ 4,575,796.35	
Federal Income Tax Three Months 1925	867,023.35	5,442,819.70

FUNDED DEBT:

6% Sinking Fund Gold Debentures	75,000,000.00
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CAPITAL STOCK AND SURPLUS:

Preference Stock no par value; \$7.00 per annum cumulative; Issued 850,000 shares	850,000.00
Common stock Class A no par value; Issued 1,500,000 shares	150,000.00
Additional 1,035,000 shares authorized for conversion of 6% Sinking Fund Gold Debentures	
Common stock Class A no par value; Issued 500,000 shares	50,000.00
Capital Surplus	4,608,681.78
Total	\$102,766,494.38

GENERAL MOTORS CORPORATION
CONDENSED CONSOLIDATED BALANCE SHEET AS OF DECEMBER 31, 1924

ASSETS		LIABILITIES, RESERVES AND CAPITAL	
CURRENT AND WORKING ASSETS:		CURRENT LIABILITIES:	
Cash in banks and on hand.....	Dec. 31, 1924	Accounts payable.....	Dec. 31, 1924
Sight drafts with bills of lading attached, and C. O. D. items.....	\$ 88,059,015.92	Notes payable.....	\$ 22,974,631.06
Notes receivable.....	4,217,684.11	Taxes, payrolls and sundries accrued not due.....	16,994,826.94
Accounts receivable and trade acceptances, less reserve for doubtful accounts.....	3,015,084.34	United States and foreign income taxes.....	5,866,310.56
Inventories at cost or market, whichever is lower.....	13,807,434.43	Accrued dividends on preferred and debenture stock.....	1,238,204.28
Prepaid expenses.....	97,201,686.02	Total Current Liabilities.....	\$ 47,073,972.84
	1,878,349.04		
Total Current and Working Assets...	\$208,179,253.86	Purchase money mortgages.....	—
FIXED ASSETS:		RESERVES:	
Investment in affiliated and miscellaneous companies not consolidated.....	\$ 61,513,125.72	Depreciation of real estate, plants and equipment.....	\$ 76,901,026.26
General Motors Corporation stocks held in treasury.....	5,000,923.71	Employees' investment fund.....	1,411,607.50
Real estate, plants and equipment.....	288,940,448.53	Sundry contingencies.....	14,520,350.19
Deferred expenses.....	6,522,848.75	Bonus to employees.....	899,102.43
Good-will, patents, etc.....	22,414,317.00	Total Reserves.....	\$ 93,732,086.38
Total Fixed Assets.....	\$384,391,664.31	CAPITAL STOCK:	
		Seven per cent preferred stock.....	\$102,250,800.00
		Six per cent preferred stock.....	2,795,300.00
		Six per cent debenture stock.....	4,869,900.00
		Common stock, no par value (1924, 5,161,599 shares; 1923, 20,646,397 shares).....	258,079,950.00
		Total Capital Stock.....	\$367,995,950.00
		Interest of minority stockholders in subsidiary companies with respect to capital and surplus.....	1,657,979.87
		SURPLUS.....	\$ 82,110,929.08
		Total Capital Stock and Surplus.....	\$451,764,858.95
TOTAL ASSETS.....	\$592,570,918.17	TOTAL LIABILITIES, RESERVES AND CAPITAL....	\$592,570,918.17

CHAPTER XXIII-XXV—RAILROAD SECURITIES

Problem I

Designate, in accordance with the description of railroad bonds in these chapters, the kind and class of railroad security listed below:

	Due
Atchison, Topeka & Santa Fe genl. 4s	1995
Norfolk & Western consolidated 4s	1996
Union Pacific 1st Mtg. and Land Grant 4s	1947
Atlantic Coast Line consol. 4s	1952
New York Central (Mich. Central) Collateral trust 3½ ..	1998
Chicago, Burlington & Quincy Illinois 4s	1949
Louisville & Nashville unified mortgage 4s	1940
Southern Pacific refunding 4s	1955

Problem II

The following is a descriptive circular of the New York, Chicago & St. Louis (Nickel Plate) 6% Preferred Stock.

THE NEW YORK, CHICAGO AND ST. LOUIS RAILROAD
COMPANY

("Nickel Plate" System)

CUMULATIVE PREFERRED STOCK, 6% SERIES A

Cumulative Preferred Stock authorized, \$45,880,000. Cumulative Preferred Stock issued, 6% Series A, \$32,720,000, of which approximately \$25,865,666 is to be outstanding upon completion of exchanges of stock under plan of consolidation and approximately \$6,854,334 is to be treasury stock. (The balance of the authorized Cumulative Preferred Stock may be issued in Series A, or in any other series with such dividend rates (not exceeding 8% per annum) and redeemable at such premiums (but at not to exceed 115%) as determined by the Directors at time of issuance). Par value of shares, \$100. Preferred as to dividends and assets and entitled to payment at par and accrued dividends in case of involuntary dissolution and at the redemption price in case of voluntary dissolution. Cumulative dividends payable quarterly January, April, July and October 1. Series A Stock is redeemable after 3 years from the date of issue, as a whole or in amounts of not less than \$1,000,000, on any dividend date on 60 days' notice at 110% and accrued dividends.

Dividends Exempt from the Present Normal Federal Income Tax
Exempt from the Pennsylvania Four Mill Tax

TRANSFER AGENT:
GUARANTY TRUST COMPANY OF NEW YORK

REGISTRAR:
BANKERS TRUST COMPANY, NEW YORK

The accompanying letter from Mr. J. J. Bernet, President of the Company, is summarized by him as follows:

The Company, known as the "Nickel Plate," is a consolidation of The New York, Chicago and St. Louis Railroad Company, Toledo, St. Louis and Western Railroad Company, The Lake Erie and Western Railroad Company, and two subsidiaries, effected April 11, 1923. The consolidated system comprises 1,696 miles of road, extending from Buffalo to connections with the principal western and south-western roads at Chicago, Peoria and St. Louis, and also reaching Indianapolis, Toledo and other important cities in the middle west.

The Company owns half the capital stock of the Detroit & Toledo Shore Line Railroad Company, connecting Toledo with Detroit, and a substantial interest in the common stock of the Chesapeake & Ohio Railway Company, with which mutually advantageous traffic arrangements have been effected.

CAPITALIZATION

The Company has outstanding \$82,976,000 funded debt, and upon completion of the exchanges of stock under the plan of consolidation will have outstanding approximately \$25,865,666 Cumulative Preferred Stock and approximately \$30,405,964 common stock. Funded debt constitutes less than 60% of the total capitalization.

PROVISIONS OF ISSUE

No stock having preference as to dividends or assets over the Cumulative Preferred Stock may be created without the consent of the holders of two-thirds of the Preferred Stock then outstanding, and at no time may the total amount of stock having preference as to dividends or assets over the common stock exceed 60% of the total capital stock then outstanding.

Except with respect to creation of prior stock, holders of Cumulative Preferred Stock are not entitled to voting powers, but if four quarterly dividends upon the Stock shall be in arrears, or if a continuous period of two years shall have elapsed during the course of which the Company shall at no time have fully paid up all dividends due on the Stock, holders shall be entitled to elect three Directors until all dividends due shall have been paid.

FINANCIAL

The combined revenues and income of the consolidated companies have been as follows:

Year Ended December 31	Operating Revenues	Gross Income	Net Income After Charges
1916..	\$28,751,099	\$6,696,418	\$4,058,917
1917..	32,065,664	5,141,997	2,254,255
1918..	40,306,413*	4,579,246	1,585,194
1919..	41,518,661*	6,151,505	2,885,188
1920..	52,385,412*	7,242,276	3,710,920
1921..	45,547,039	7,137,392	3,724,058
1922..	50,948,424	8,853,609	5,339,963
Eight months ended August 31, 1923	38,581,612	8,525,316	5,921,292

* Properties operated by U. S. R. R. Administration from January 1, 1918 to February 29, 1920.

The results of the lines under separate operation do not fully indicate the present earning capacity or future possibilities of the consolidated system under unified operation. Nevertheless, net income for the seven years ended December 31, 1922, averaged \$3,365,499 per annum, or over twice the annual dividend requirement of \$25,865,666 Cumulative Preferred Stock. In 1922 net income amounted to over 3.4 times, and for the eight months ended August 31, 1923, was at the rate of over 5½ times, such dividend requirement.

Dividends at the rate of 6% per annum are being paid on the Company's common stock.

GENERAL

The management which has operated the Nickel Plate since 1916 has also supervised the operation of the other lines comprised in the consolidated system since early in 1922, and the benefits of co-operation and unified management are reflected in the increase in both gross and net earnings during 1922 and the current year. The formal consolidation recently effected makes possible further economies in administration and operation and enables the consolidated lines to give improved service to the public.

Questions

1. Would you consider this an investment stock on the basis of the information?
2. What other data would you require as a basis for your judgment?

3. With what other railroad preferred stocks would you compare it?
4. Do you regard the dividend record and the past earnings as sufficient to assure a permanent return in the future?
5. Give reasons with your answers.

Problem III

The following table contains a comparative statement of operating statistics of Western transcontinental trunk line railroad systems.

COMPARISONS OF OPERATING STATISTICS 1916, 1922 AND 1923

		Tons per Loaded Car (a)	Tons per Train (a)	Passengers per Train	Freight Car Miles per Car Day
Atchison, Topeka and Santa Fe	1916	20.0	468	65	32*
	1922	21.5	582	66	33.0
	1923	21.3	588	69	37.0
Southern Pacific.....	1916	23.6	594	58	36*
	1922	23.0	663	74	36.6
	1923	22.9	661	76	41.9
Union Pacific.....	1916	22.7	605	48	61*
	1922	22.3	642	61 (6)	55.3
	1923	21.2	640	66	62.8
Northern Pacific.....	1916	23.6	717	56	30*
	1922	25.21	681	49	25.9
	1923	25.99	725	49	30.5
Great Northern.....	1916	.....	...	50.6	24*
	1922	28.5	781	40.1	22.9
	1923	28.9	814	39.6	26.9

* Approximate.

(a) Includes revenue and company freight.

Questions

1. Which of the five systems shows the greatest progress in economical operation based on the results shown in the table?
2. Which statistical item is the best index of economy?
3. What geographical, physical and traffic differences would affect the validity of the above statistical comparisons?

Problem IV

On the basis of the following table, point out the progress in efficiency and economy of operation made by the Missouri Pacific.

MISSOURI PACIFIC

COMPARISON OF SELECTED OPERATING STATISTICS, 1920 TO 1923

Unit	Year 1920	Year 1921	Year 1922	Year 1923
Freight cars per train.....	33.3	35.2	35.2	37.0
Gross tons per train.....	1,313	1,310	1,336	1,392
Net tons per train.....	640	587	616	633
Net tons per loaded car.....	27.1	25.9	25.3	25.5
Train speed—miles per train hour.....	11.0	12.4	11.7	11.1
Net ton-miles per train hour.....	7,025	7,248	7,185	7,031
Lb. coal per 1,000 gr. ton miles.....	184	180	164	162
Net ton miles per car day.....	453	399	390	468
Car miles per day.....	22.8	23.3	21.7	26.6
Locomotive miles per loco. day.....	73.0	65.7	57.7	63.2
Per cent freight cars unserviceable.....	4.4	8.4	9.4	8.3
Per cent freight locos. unserviceable.....	26.9	30.8	31.8	32.9

Problem V—Analysis of Balance Sheet

ATCHISON, TOPEKA & SANTA FE RAILWAY SYSTEM

COMPARISON OF BALANCE SHEETS

ASSETS

	Dec. 31, 1923	June 30, 1916	Increase
Investment in Road and Equipment....	*\$874,527,000	\$686,627,000	\$187,900,000
Investment in Stocks and Bonds of Affiliated Companies and other Investments.....	**31,015,000	28,850,000	2,165,000
Materials and Supplies.....	32,520,000	16,926,000	15,594,000
Total Invested Assets.....	\$938,062,000	\$732,403,000	\$205,659,000
Current Assets:			
Cash and Special Deposits.....	\$28,075,000	\$43,699,000	Dec. \$15,624,000
U. S. Government Securities.....	31,473,000	.....	31,473,000
Other Current Assets.....	14,936,000	7,768,000	7,168,000
Total Current Assets.....	\$74,484,000	\$51,467,000	\$23,017,000
Deferred Assets and Unadjusted Debts	4,321,000	3,452,000	869,000
TOTAL ASSETS.....	\$1,016,867,000	\$787,322,000	\$229,545,000

* Equipment \$216,407,000 in 1923. Not segregated in 1916.

** Includes miscellaneous physical property of \$4,979,000. Not segregated in 1916.

LIABILITIES

	Dec. 31, 1923	June 30, 1916	Increase
Capital Stock.....	\$356,592,000	\$338,486,000	\$18,106,000
Funded Debt.....	275,959,000	301,552,000	Dec. 25,593,000
Current Liabilities including tax accruals	46,246,000	20,782,000	25,464,000
Accrued Depreciation—equipment.....	76,016,000	28,603,000	47,413,000
Deferred Liabilities and Unadjusted Credits.....	9,163,000	4,640,000	4,523,000
Surplus.....	252,891,000	93,259,000	159,632,000
TOTAL LIABILITIES.....	\$1,016,867,000	\$787,322,000	\$229,545,000
Current Asset Ratio.....	1.6-1	2.5-1	

Questions

On the basis of the above comparative balance sheets point out:

1. Items which show improvement in financial condition.
2. The net capitalization at each period.
3. The changes in the capital structure (style of capitalization).
4. The significance, if any, of the decline in the current asset ratio in 1923 as compared with 1916.
5. The probability or improbability of additional financing.

Problem VI—Analysis of the Investment Merits of a Railroad Bond.

The following is a description of a railroad mortgage bond excerpted from the Fitch Bond Service.

\$20,000,000

SOUTHERN RAILWAY CO.

Dev. and Gen. 6s.

Due Apr. 1, 1956.

Dated April 18, 1906. Interest payable April 1 and October 1 at J. P. Morgan & Co., New York.

Tax Status—2% Federal Income Tax paid by the company without deduction.

Authorized

\$200,000,000

Outstanding (Nov. 12, 1923)

4s	\$61,333,000
6½s	30,000,000
↑6s	20,000,000

111,333,000

*Carry supplemental coupons for 2½% to be secured by any new mortgage created by the company.

†Carry supplemental coupons for 2% to be secured by any new mortgage created by the company.

Purpose of Issue—The proceeds of \$20,000,000, 6s are to be used for additions and betterments, including enlargement of yard, shop and freight facilities, additional tracts and grade improvements. It is estimated that these additions and improvements will effect savings over present costs of operation which will be equivalent to a return of 20% on the capital so invested, as contrasted with a cost of about 6½% to the company of the money required.

Denomination—Coupon \$1,000, registerable as to principal. Registered \$1,000 and authorized multiples thereof. C. & R. interchangeable.

Trustee—Guaranty Trust Co., New York.

Organization—Incorporated in Virginia in 1894. The Southern Railway System comprising 8,300 miles of railway, of which 6,971 miles are directly operated by the Southern Railway Company and the balance by controlled and affiliated companies, serves the south with a net work of lines traversing twelve states with a population of about 40,000,000. The System's lines reach from the Northern gateways at Washington, Cincinnati and Louisville and from the Western gateways at St. Louis and Memphis, to the ocean ports of Norfolk, Charlestown, Savannah, Brunswick and Jacksonville, and to the Gulf ports of Mobile and New Orleans, passing through the largest cities in the south.

Capitalization	Outstanding
Common	\$120,000,000
Preferred (5% non-cum.)	60,000,000
Funded debt	*270,000,000

*Approximately.

Secured as to principal and interest at the rate of 4% by a direct lien on 4,316 miles of road, subject to mortgage indebtedness outstanding at the rate of \$31,000 per mile; additionally secured by first lien upon all the bonds and stocks of railways aggregating 523 miles, the entire stock issues of railways aggregating 492 miles, the majority of stocks of railways aggregating 514 miles and lease holds or trackage or other rights to use railways aggregating 824 miles.

Prior Liens:	Outstanding
System and divisional bonds.....	*\$139,473,000
*Approximately.	

Earnings—Years ended December 31:			
	Gross	Net	Interest
*1923	\$150,000,000	\$27,400,000	\$12,900,000
1922	128,489,847	21,657,486	12,833,689
1921	128,715,150	14,892,906	12,866,283

*Oct., Nov. and Dec. results estimated.

Listed—Application will be made to list this issue (\$20,000,000 6s) on the New York Stock Exchange.

Original Market—\$20,000,000 6s offered Nov. 19, 1923, by J. P. Morgan & Co., First National Bank, The National City Co., Harris Forbes & Co., Guaranty Co., Bankers Trust Co., New York, etc., at 96½ and interest from Oct. 1, 1923, to yield about 6.25%.

Questions

1. What kind of a railroad bond (based on mortgage security) would you call the one described above?
2. Explain the meaning of the "supplemental coupons of 2%." Why are these necessary?
3. What gauge or index would you use to measure the relative amount of prior lien indebtedness?
4. Are the net earnings as shown adequate to secure the safety of income?
5. Are there any means of measuring or determining the safety of the principal from the data contained in the description?
6. What other sources of information would you seek in order to justify your conclusions regarding this bond issue?

CHAPTER XXVI-XXVIII—PUBLIC UTILITY SECURITIES

Problem I

The following circular describes an issue of bonds of a local public utility:

THE DALLAS GAS COMPANY

FIRST MORTGAGE 6% GOLD BONDS

Dated October 1, 1921

Due October 1, 1941

Interest payable semi-annually (April 1 and October 1) in New York without deduction for Normal Federal Income Tax up to 2%. Denominations \$1,000 and \$500, registerable as to principal. Callable at 107½ and accrued interest through October 1, 1927, and thereafter at a premium decreasing ½ of 1% each year to 100½ during the last years of life.

TAX REFUND IN PENNSYLVANIA AND MASSACHUSETTS

CAPITALIZATION

(as of November 30, 1924)

Capital stock	\$ 850,000
First Mortgage 6% Gold Bonds due 1941.....	2,171,000

TERRITORY: The Dallas Gas Company and the County Gas Company, subsidiaries of the Dallas Gas Corporation, do the entire gas business in Dallas, Texas (the leading manufacturing, commercial, and financial center of the state) and environs, serving an estimated population of 210,000. The Company serves, without competition, all the city of Dallas defined by the city limits of March 30, 1912, which includes over 85% of the city's entire population.

PROPERTY: The Company supplies gas to more than 32,300 consumers through a distributing system of 295 miles of high and low pressure mains. The gas is at present obtained from natural gas production and transportation companies operating in the Oklahoma and Texas gas fields which, in the opinion of geologists, are capable of furnishing a large supply of gas for many years to come.

SECURITY: These bonds, in the opinion of counsel, are secured by a direct first mortgage upon all the property (except securities), rights, and franchises of the Company.

FRANCHISE: The franchise approved on December 3, 1917 established a definite "Property Value" which aggregated as of December 31, 1922, \$3,469,741.51. Under the franchise the Company is authorized to appropriate to itself, as a first charge, net earnings to the extent of 8% of the "Property Value" and to the accumulate "surplus," "accident," and "maintenance and depreciation" reserves.

EARNINGS

For the twelve months ended November 30, 1924

Gross Earnings	\$2,413,435.49
Operating Expenses, Maintenance & Taxes.....	2,019,548.65
Net Earnings	393,886.84
Annual Interest Charges on \$2,171,000 First Mortgage Bonds	130,260.00

NET EARNINGS MORE THAN 3 TIMES ANNUAL BOND INTEREST

SINKING FUND: The Mortgage provides also for an annual Sinking Fund of $1\frac{1}{4}\%$ of the total amount of these bonds issued, the funds to be used solely for the retirement of bonds of this series.

Questions

1. Is the information contained in this circular adequate for the formation of a judgment as to the relative investment merits of the obligations?
2. What is the nature of the company's franchise?
3. Is the sinking fund adequate to assure the repayment of principal?
4. Point out additional information that might be desirable in forming a judgment regarding this issue.

Problem II

Discuss and point out the significance of each of the items noted in the following circular describing an issue of public utility bonds and apply the tests outlined in Chapter XXVII.

THE VIRGINIAN POWER COMPANY

FIRST LIEN AND REFUNDING MORTGAGE 6½% GOLD BONDS

Series A

Dated January 1, 1924

Due January 1, 1954

Interest payable January and July 1. Coupon bonds in denominations of \$1,000, \$500 and \$100, registerable as to principal. Redeemable at the option of the Company, in whole or in part, on 30 days' notice to and including December 31, 1933, at 105, thereafter to and including December 31, 1938 at 104, thereafter to and including December 31, 1943 at 103, thereafter to and including December 31, 1948 at 102, thereafter to and including December 31, 1952 at 101, and thereafter to maturity at par, plus accrued interest in each case. Principal and interest payable at the office or agency of the Company in the City of New York.

Interest payable without deduction for normal Federal Income Tax not to exceed 2%.

Pennsylvania Four Mills Tax, Connecticut Four Mills Tax, Maryland Four and One-Half Mills Tax, District of Columbia Five Mills Tax and Massachusetts Six Per Cent Income Tax refundable to holders resident in these States upon application to the Company.

The following information is summarized by Mr. R. E. Burger, a Vice-President of the Company, from his letter to us dated October 15, 1924:

BUSINESS

The Virginian Power Company owns and operates an extensive electric power system supplying electric energy to important public utility companies in a number of municipalities, including Charleston, South Charleston, Huntington, Montgomery and Nitro, West Virginia. The Company also supplies electric current to many coal mining companies in the famous Kanawha-New River District, operating some of the largest and most important mines in the United States. Among its customers are many manufacturing concerns representing widely diversified industries attracted to the District by the abundance of cheap fuel, varied natural resources and other advantages.

Through a subsidiary, operating in Portsmouth, Ohio, the Company also does, without competition, the electric light and power business in Portsmouth, Ohio, and adjoining communities, and furnishes street railway and interurban service to this city and vicinity.

CAPITALIZATION

	Authorized	Outstanding
First & Collateral Trust Mortgage 5% Gold Bonds, due 1942 (closed for issuance to the public)		
First Lien and Refunding Mortgage 6½% Gold Bonds, Series A	\$15,000,000	\$5,925,000*
Prior Preference Stock (shares of no par value)	(a)	\$5,000,000
6% Non-Cumulative Preferred Stock	250,000 shs.	32,500 shs.†
Common Stock (shares of no par value)	\$ 5,000,000	\$ 126,700
	150,000 shs.	68,802 shs.

(a) Issuance of additional bonds restricted by provisions of the Mortgage.
 * Not including First and Collateral Trust Mortgage 5% Gold Bonds pledged under the Mortgage securing the First Lien and Refunding Mortgage Gold Bonds.

† These 32,500 shares are outstanding as Series A and are entitled to cumulative dividends at the rate of \$7.00 per share per annum.

PROPERTY

The Virginian Power Company and its Ohio subsidiary own two modern steam-power stations, one located near Charleston, W. Va., with a present installed generating capacity of 63,750 K. V. A., including equipment of 22,250 K. V. A. leased from the United States Government, the other at Portsmouth, Ohio, with a generating capacity of 11,875 K. V. A. With the installation of additional equipment which will shortly be in operation, the combined generating capacity of the Company and its subsidiaries will exceed 100,000 K. V. A.

The Company and its subsidiaries also own 127 sub-stations with a combined transformer capacity of 138,344 K. V. A., comprehensive systems of high-tension transmission and distribution lines aggregating 660 miles in length, and a street railway and interurban system.

SECURITY

The First Lien and Refunding Mortgage Gold Bonds, in the opinion of counsel, represent a lien on the physical properties of a subsidiary operating in Portsmouth, Ohio and vicinity, through the pledge and deposit with the Trustee of all the bonds and stocks of this subsidiary. These properties have been appraised at a reproduction cost new of \$4,150,000. There have also been pledged with the Trustee as additional security \$1,500,000 First & Collateral Trust Mortgage 5% Gold Bonds of The Virginian Power Company and an additional \$500,000 principal amount of First & Collateral Trust Mortgage 5% Gold Bonds is to be pledged with the Trustee upon completion of the construction work now in progress, against which bonds no additional First Lien & Refunding Mortgage Gold Bonds can be issued. They are further secured by a direct mortgage lien on substantially all of the physical properties and franchises owned by The Virginian Power Company and subsequently acquired, subject only to the First & Collateral Trust Mortgage 5% Gold Bonds outstanding in the hands of the public and any divisional bonds existing on subsequently acquired properties at the time of Acquisition. The Mortgage provides that all additional First & Collateral Trust Mortgage 5% Gold Bonds issued hereafter and any divisional bonds on subsequently acquired properties issued after acquisition of such properties by The Virginian Power Company must be pledged under the Mortgage securing the First Lien and Refunding Mortgage Gold Bonds.

EARNINGS

The following is a comparative statement of the combined earnings for the twelve months ended August 31, 1924 and 1923:

12 Months Ending August 31,	1924	1923
Gross Earnings	\$3,356,372.93	\$3,319,729.79
Operating Expenses and Taxes (including Federal Taxes)	1,972,519.03	2,082,419.25
Net Earnings	\$1,383,853.90	\$1,237,310.54
Annual interest charges on total funded debt in hands of the public	621,250.00	
Net earnings equal to more than twice such annual interest charges.		
About 95% of net earnings were derived from the electric light and power business.		

The installation of additional equipment now nearing completion will increase the generating capacity of the Company more than 30%.

VALUATION

The physical properties of the Company and its subsidiaries according to appraisals by Ford, Bacon & Davis, Incorporated, and F. C. Hamilton, Consulting Engineers, have a reproduction cost new substantially in excess of the total funded debt outstanding in the hands of the public. These values are being considerably increased through permanent additions, extensions and betterments now under construction.

ISSUANCE OF ADDITIONAL BONDS

The Mortgage provides, among other things, that additional First Lien and Refunding Mortgage Gold Bonds of any series may be issued (a) against the pledge or deposit, par for par, of First and Collateral Trust Mortgage 5% Gold Bonds outstanding at the date of the execution of the Mortgage, or other underlying bonds, or cash, or United States obligations, or (b) against the pledge of First and Collateral Trust Mortgage 5% Gold Bonds certified after the date of the execution of the Mortgage but subject to the restrictions therein contained, or (c) to refund par for par

First and Collateral Trust Mortgage 5% Gold Bonds outstanding at the date of the execution of the Mortgage, or other underlying bonds, or First Lien and Refunding Mortgage Gold Bonds of other series, or (d) to the extent of 75% of expenditures for additions, extensions, betterments or improvements, and 75% of the cost or value (whichever is less) of new property, coming under the Mortgage. The Mortgage also provides, among other things, that, subject to the restrictions therein contained, bonds may be issued (a) to the extent of 75% of the cost of stocks of a subsidiary (as defined in the Mortgage) provided not less than 66 $\frac{2}{3}$ % of the stocks having voting power of such subsidiary are so purchased and pledged under the Mortgage, or (b) to the extent of 75% of the expenditures for additions, extensions, betterments or improvements to the properties of any such subsidiary or (c) to the extent of 75% of the expenditures for property purchased by any such subsidiary or (d) to refund, par for par, the indebtedness of any such subsidiary. Before any additional bonds may be issued under the foregoing provisions, there must have been pledged under the Mortgage a total of \$2,000,000 principal amount of First and Collateral Trust Mortgage 5% Gold Bonds. The aggregate principal amount of bonds at any time to be outstanding under the Mortgage will be limited to \$150,000,000.

The Mortgage further provides that no additional bonds may be issued under the Mortgage for any purpose (except on account of the pledge or refundment of the present outstanding First and Collateral Trust Mortgage 5% Gold Bonds and of underlying bonds and indebtedness of a subsidiary, and to refund bonds of any other series), unless the combined net earnings (as defined in the Mortgage) of the Company and its subsidiaries, during the twelve consecutive calendar months ending within sixty days next preceding the application for bonds shall have been one and three quarters times the interest charges for one year on all bonds outstanding and then requested to be issued under the Mortgage, and on all mortgage indebtedness outstanding in the hands of the public and secured by lien upon any of the Company's property superior to the lien of the Mortgage, and on all mortgage indebtedness outstanding in the hands of the public secured by lien on any part of the property of any subsidiary (as defined in the Mortgage).

MAINTENANCE AND RENEWALS

The Mortgage contains a maintenance and renewal provision requiring an annual expenditure or reserve after 1924 the amount of which for any year will be the sum of the amounts represented by certain percentages of the gross operating revenues for such year derived by the Company and its subsidiaries from the several branches of their respective business, including among others—(a) 12% of revenues from steam-electric business, (b) 20% of revenues from street railway and/or interurban railway business. These percentages may be readjusted at 5 year intervals by agreement between the Company and the Trustee or by arbitration as more fully provided in the Mortgage. If the Company in any year expends or reserves more than is required under such provision, it shall be entitled to credit for such excess in any subsequent year.

SINKING FUND

The Mortgage provides that during each year, commencing with 1925, so long as any Series A bonds are outstanding, the Company will either expend for permanent improvements, additions, extensions or betterments to the properties of the Company and its subsidiaries (against which no bonds may be issued so long as any Series A bonds are outstanding) a sum equal to 2% of the principal amount of Series A bonds outstanding at the beginning of the year, or expend in the retirement of Series A bonds a sum equal to 1% of the principal amount of such bonds outstanding at the beginning of the year, pro rata allowances being made for sinking funds applicable to obligations of issues pledged under the Mortgage. If the Company in any year expends more than is required under such provision, it shall be entitled to credit for such excess in any subsequent year.

CONCLUSION

The inter-connection planned between the properties of The Virginian Power Company and of its Ohio subsidiary will enable the Company to serve new territories offering extensive possibilities for the development of electric power business.

All legal matters relating to the First Lien and Refunding Mortgage Bonds issued, have been under the supervision of Messrs. Earle & Hoar and Messrs. Frueauff, Robinson & Sloan, New York. Appraisals of properties by Ford, Bacon & Davis, Inc., New York, and by F. C. Hamilton, Consulting Engineers, New York.

CHAPTERS XXIX-XXX—INDUSTRIAL SECURITIES

Problem I—Unsatisfactory Annual Report to Stockholders

The following is the annual report of an industrial company to its shareholders. Indicate information lacking but desirable in order to determine the investment merits of its securities.

NATIONAL TRANSIT COMPANY

206 Seneca Street, Oil City, Pa.

TO THE STOCKHOLDERS:

The Statement of the National Transit Company for the year ending December 31, 1924, follows:

Net Income from all Sources for the year ending December 31, 1924		\$774,740.67
Disposition of Net Income:		
Dividend Appropriations	\$763,500.00	
Miscellaneous Appropriations	1,735.00	
To Surplus	9,505.67	\$774,740.67

ASSETS

Investments		\$17,461,008.03
Pipe Line Plant	8,460,252.99	
Other Investments	9,000,755.04	
Current Assets		2,169,594.01
Cash	572,022.81	
Accts. Receivable	1,597,571.20	
Deferred Assets		26,600.00
Unadjusted Debits		5,413.57
		<u>\$19,662,615.61</u>

LIABILITIES

Capital Stock	\$ 6,362,500.00	
Current Liabilities	105,823.19	
Unadjusted Credits	8,532,610.21	
Includes Reserves for Depreciation, Fire Insurance, Tax Liability, Compensation Insurance, Etc.		
Corporate Surplus	4,661,682.21	
		<u>\$19,662,615.61</u>

Respectfully,

F. D. WILLIAMS, President.

Problem II—Analysis of a General Balance Sheet

(See following page for problem.)

CONSOLIDATED BALANCE SHEET DECEMBER 31, 1924
BARNSDALL CORPORATION AND SUBSIDIARY COMPANIES

ASSETS

Properties:			
Oil, Gas, Mining and Miscellaneous Properties.....	\$48,195,853.04		
Less Reserves for Depreciation and Depletion.....	14,480,525.31		\$33,715,327.73
Investments in and Advances to Affiliated Companies			
Not Controlled:			
Investments in Shares and Bonds.....	\$ 434,604.26		
Advances to Affiliated Companies.....	198,215.37		632,819.63
Sinking Fund for Redemption of Funded Debt of Subsidiary Companies			96,666.63
Barnsdall Corporation Stock Held in Treasury at Par.....			347,800.00
Deferred Charges to Operations.....			121,247.84
Current Assets:			
Cash	\$ 673,677.27		
Bills and Accounts Receivable.....	762,289.44		
Inventories of Oil at Market Prices.....	910,424.72		
Inventories of Minerals at Cost.....	86,671.50		
Inventories of Supplies at Cost.....	536,406.51		
U. S. Securities Owned.....	4,941.20		2,974,410.64
			<u>\$37,888,272.47</u>

LIABILITIES

Capital Stock of Barnsdall Corporation:			
	Class A	Class B	
Authorized	\$15,000,000.00	\$15,000,000.00	
Unissued	1,000,000.00	11,286,600.00	
Outstanding	\$14,000,000.00	\$ 3,713,400.00	\$17,713,400.00
Capital Stock of Subsidiary Corporations Not Owned by Barnsdall Corporation			2,109,132.00
Payment Received on Contract: Involved in Acquisition of Minority Interest in Subsidiary Company and Subsequent Issuance of Capital Stock			500,625.00
Funded Debt of Barnsdall Corporation and Subsidiary Companies:			
Barnsdall Corporation 8% Sinking Fund Convertible Gold Bonds, due 1931, Outstanding.....	\$ 5,710,700.00		
Funded Debt of Subsidiary Companies, Outstanding	697,500.00		6,408,200.00
Proceeds of Advance Sales of Oil and Gas.....			450,200.12
Current Liabilities:			
Bills Payable	\$ 1,790,548.71		
Accounts Payable	453,244.75		
Accrued Interest, Taxes and Expenses.....	90,314.81		2,334,108.27
Surplus of Barnsdall Corporation and Subsidiary Companies:			
Applicable to Stock of Barnsdall Corporation.....	\$ 8,001,728.23		
Applicable to Minority Stockholdings in Subsidiary Companies	370,878.85		8,372,607.08
			<u>\$37,888,272.47</u>

Questions

1. In what respects is the foregoing balance sheet unsatisfactory to a security holder?
2. Analyze the net working capital? Is it sufficient?
3. Is there evidence of need of additional financing and why?

Problem III—Readjustment of Income Statement

How would you criticize the following comparative income statement of the American Sugar Refining Company, excerpted from the *Commercial and Financial Chronicle*.

AMERICAN SUGAR REFINING COMPANY

RESULTS FOR CALENDAR YEARS

	1924	1923	1922	1921
Profit from operations....	y\$327,637	y\$1,693,070	x\$10,083,833	y\$2,177,276
Int. on loans and deposits	1,644,615	2,955,674	y381,130	y1,033,661
Income from investment....	2,593,049	5,552,488	1,523,008	4,113,856
Net prof. from sale of assets	8,209,380	4,542,631	129,063	y1,489,310
Adjustment, tax reserve....	1,000,000	.....	.....	.....
From sur. of former years	.....	.....	.....	5,311,368
Total	\$13,119,407	\$11,357,744	\$11,354,773	\$4,724,977
Depr., renew. and replac't. ....	.....	\$1,000,000	\$1,000,000	.....
Reserves .....	.....	4,542,631	.....	.....
Interest on bonds.....	1,800,000	1,800,000	1,800,000	.....
Preferred divs. (7%).....	3,149,986	3,149,986	3,149,986	3,150,000
Common dividends .....	.....	.....	.....	(3½) 1,574,977
Total deductions	\$4,949,986	\$10,492,617	\$5,949,986	\$4,724,977
Balance to surplus.....	\$8,169,421	\$865,107	\$5,404,787	.....
x After provision for taxes. y Loss.	.....	.....	.....	.....

Note: It is suggested that the student be required to readjust the statement to show the actual current earnings for the year 1924.

CHAPTER XXXI—SECURITIES OF FINANCIAL INSTITUTIONS

Problem

ANALYTICAL COMPARISON OF NEW YORK CITY NATIONAL BANKS
December 31, 1924

Name	Capital Stock (par value of shares \$100)	Surplus and Undivided Profits		
		1924	1923	Increase
Chatham & Phenix.....	\$10,500,000	\$ 9,318,465	\$ 9,114,825	\$ 203,640
Chemical National.....	4,500,000	17,024,108	16,671,832	352,276
National Bank of Commerce.....	25,000,000	39,760,960	38,624,312	1,136,648
Gotham National.....	1,500,000	511,938	755,628	243,690*
Hanover.....	5,000,000	23,518,980	22,151,117	1,367,863
Seaboard.....	5,000,000	7,853,300	7,315,794	536,556

* Decrease

Name	Aggregate Deposits		Net Earning Divided		Bid and Asked
	1924	1923	1924	Rate on Stock	(Price of Shares)
Chatham & Phenix	\$194,806,100	\$174,944,527	\$1,883,640	16%	298 - 303
Chemical National	151,543,400	129,515,549	1,432,276	24%	655 - 670
National Bank of Commerce ..	533,710,900	447,942,169	5,136,648	16%	362 - 368
Gotham National	17,854,400	16,310,500	108,690*	6%	135 - 145
Hanover	166,131,110	147,315,422	2,567,863	20%	475 - 507
Seaboard	151,093,800	112,904,338	1,176,556	16%	450 - 460

Questions

Which of the foregoing six banks show:

1. The greatest earning power in relation to capital stock?
2. The greatest liquidating value per share of stock?
3. The most satisfactory relationship of deposits to capital and surplus?
4. The largest profit on capital employed in business (including in capital the amount of capital stock, surplus and deposits)?
5. The best investment bargain represented by the market price of each company's shares?

CHAPTER XXXII—FIRE INSURANCE COMPANIES

Problem

Name	Capital	Par Value of Shares	Surplus	Premium Reserve	Income from Investments
Aetna	\$ 5,000,000	\$100	\$11,429,128	\$23,968,830	\$1,652,122
Continental	10,000,000	25	20,744,601	21,425,369	2,686,838
Home	18,000,000	100	19,499,862	38,024,590	3,908,856
Niagara	3,000,000	50	5,009,428	9,095,415	836,078
Phoenix	5,000,000	100	13,098,907	11,232,734	1,437,952
Westchester	1,500,000	10	2,904,682	7,298,768	557,634

Questions

1. On the basis of the foregoing statement work out for each of the six companies—

- (a) The liquidating value per share.
- (b) The relation of business done (on basis of the premium reserve) to the surplus to policy holders (i.e., the capital and surplus). What is the significance of this item?

- (c) The relation of income from investments to capital, surplus and premium reserve.
2. Based on the results of your analysis which company offers the highest degree of safety to shareholders?
 3. What other data are required to work out this problem adequately?

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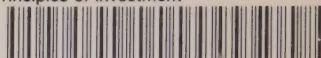
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